

 **INVADING RUSSIA** NAPOLEON'S DEATH MARCH

# HISTORY *of* WAR



**"I WAS ONE OF  
THE FIRST ON  
JUNO BEACH"**

BRITISH D-DAY VETERAN  
DAVID TEACHER SPEAKS

**MYTH VS MACHINE**

## TIGER

UNCOVER THE TRUTH BEHIND NAZI  
GERMANY'S ARMoured FIST

**IWM  
PREVIEW  
SYRIA**  
A CONFLICT  
EXPLORED



## MERCENARY MENACE

THE MOST FEARED SELL-SWORD  
OF THE MEDIEVAL WORLD

Future

ISSUE 043

**Digital Edition**

GreatDigitalMags.com

**BRIEFING:  
SOUTH SUDAN**  
EXPLORE THE  
BRUTAL ORIGINS  
OF AFRICA'S  
NEWEST COUNTRY



**CONQUEST OF  
NEW ZEALAND**  
VICTORIA CROSS  
HEROISM ON THE  
BRITISH EMPIRE'S  
FRONT LINE



## BATTLE OF MIDWAY

HOW AMERICAN PILOTS TURNED  
THE TIDE IN THE PACIFIC THEATRE



INSIDE THE GENIUS DESIGN



FIRST-HAND VETERAN ACCOUNTS



THE REAL BATTLEFIELD RECORD



# KING & COUNTRY'S

# 'Buffalo Soldiers'

## 10 TH. U.S. CAVALRY

The original 'Buffalo Soldiers' were African American men of the 10th. Cavalry of the United States Army formed in 1866 at Fort Leavenworth, Kansas. Their peculiar nickname was given to them by the Native American tribes they fought during the 'Indian Wars' after the end of the Civil War.

The reason for this nickname was, to Indian eyes at least, the strong, tightly-curved hair of these black soldiers resembled the hair of the American Bison... *the venerated buffalo!*

From 1866 until the early 1890's the 10th. Cavalry served mainly in the southwest United States fighting against the *Commanches* and *Apaches*. Virtually every campaign in the Southwest during

that time involved the 10th. and they earned a distinguished regimental record winning no less than 19 'Medals of Honor'.

### OUR 10th. U.S. CAVALRY

Director John Ford's classic movie "Sergeant Rutledge" (1960) was the major inspiration behind these new soldiers.

TRW127

### 10TH. U.S. CAVALRY

2ND RELEASE

TRW-S02

(Valued Added Bonus set)

### 10TH. U.S. CAVALRY

1ST RELEASE

TRW-S01

(Valued Added Bonus set)

12 x 'Buffalo Soldiers' (including one white officer) are being launched this year... in 3 x separate batches.

The first release contains 6 figures, a veteran sergeant with the troop guidon and five others in dramatic 'action' poses.

Our second release with 5 figures has the white officer together with his bugler and three more troopers firing their carbines.

A third release shows a *black corporal* in a desperate hand-to-hand struggle with a knife-wielding *Apache* warrior!

All figures can be purchased individually (except for the 2-man fighting set) and are also available as special "Value Added Bonus sets".

## KING & COUNTRY

**AUTHENTIC HAND-MADE HISTORY**

Available around the world wherever fine quality military miniatures are sold.



### KING & COUNTRY HEADQUARTERS

Suite 2301, 23rd Floor, No.3 Lockhart Road,  
Wanchai, Hong Kong  
Tel : (852) 2861 3450 Fax : (852) 2861 3806  
E-mail : sales@kingandcountry.com

### KING & COUNTRY SHOP

245, Pacific Place, 88 Queensway,  
Hong Kong  
Tel : (852) 2525 8603  
Website : www.kingandcountry.com

### KINGS X

206 Alamo Plaza, San Antonio, TX 78205, USA  
Tel : (210) 226 7000 Fax : (210) 226 7117  
E-mail : sales@kingsx.com  
Website : www.kingsx.com



# Welcome

**“Tigers have to be used as battering rams in a running attack and as a bumper in the focal point of a defence”**

– Hauptmann Lange, CO 2./s.Pz.Abt 502

**I**t struck fear into the hearts of Allied crews, and has since gained a legendary status of its own as an ‘invincible’ triumph of German engineering – but was the Tiger (and its iterations) really the ultimate tank of WWII?

This issue of **History of War** takes you inside this iconic vehicle, picking apart its impressive design features and investigating the real story of its combat performance.

Elsewhere this issue, D-Day veteran David Teacher reveals his experiences driving a Bedford truck onto Juno Beach, serving alongside the 101st Airborne at the Bulge, and finally crossing the Rhine into Nazi Germany.

His story reveals the unique role carried out by Combined Operations units during Overlord, and the mammoth logistical challenge troops faced.



*Tim*

**Tim Williamson**  
Editor



**EMAIL**

timothy.williamson@futurenet.com

## CONTRIBUTORS



### TOM GARNER

In addition to sitting down with British veteran David Teacher (page 48), Tom also spoke with Imperial War Museums' Dr Christopher Philips, co-curator of a new exhibition on the conflict in Syria and its historical context (page 78).



### ROB SCHÄFER

Presenting incredible first-hand accounts and expert analysis, Rob investigates the history of the infamous Tiger tanks. Find out whether their fierce reputation is justified, and discover what it was like to fight alongside them over on page 28.



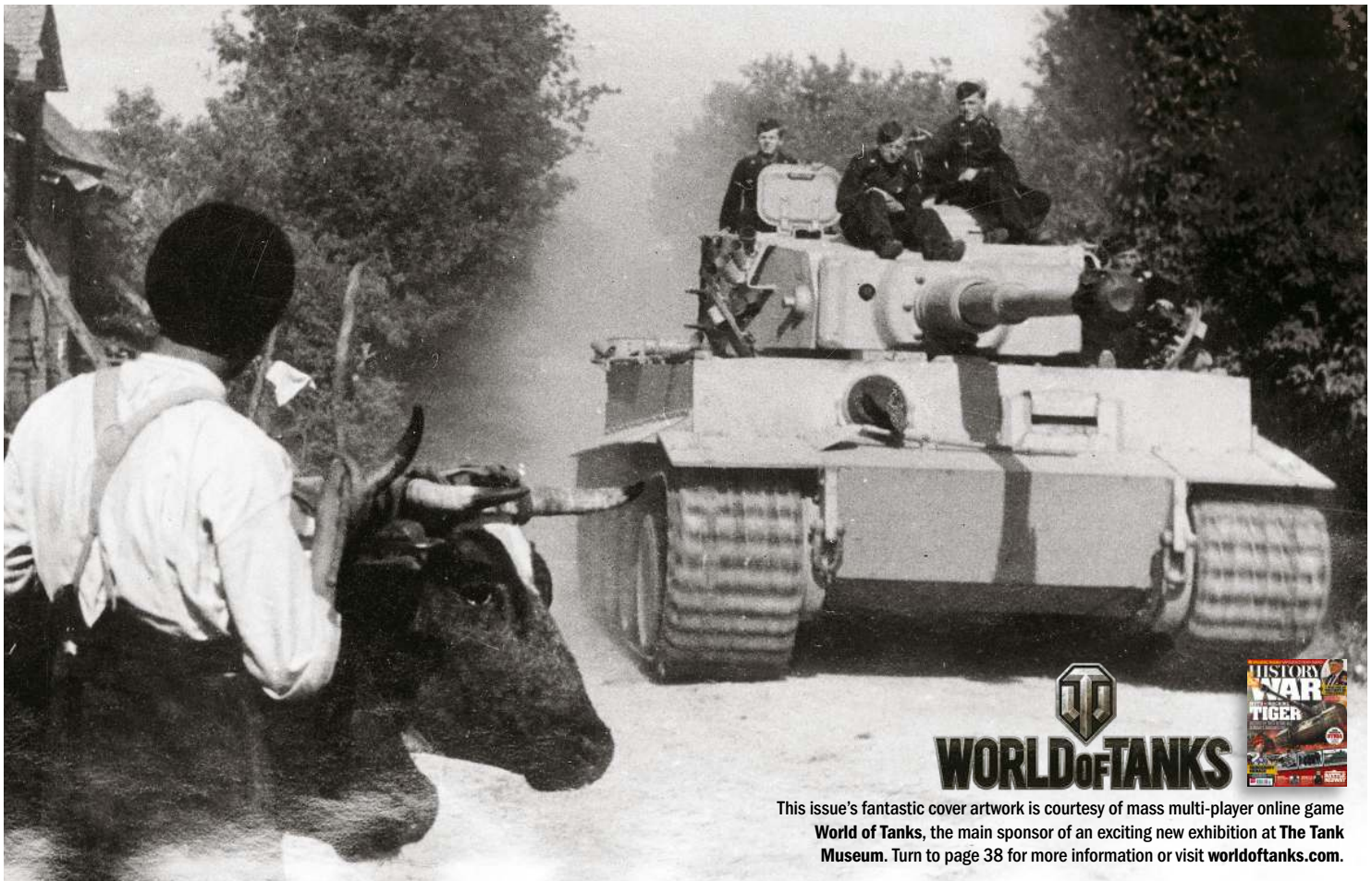
### TOM FARRELL

After separating from its neighbour to the north in 2011, South Sudan became the newest nation in the world, but was immediately plunged into a bloody civil war. What caused this conflict and at what cost? Find out on page 72.

[www.historyanswers.co.uk](http://www.historyanswers.co.uk)

 **FACEBOOK**  
/HistoryofWarMag

 **TWITTER**  
@HistoryofWarMag



  
**WORLD OF TANKS**



This issue's fantastic cover artwork is courtesy of mass multi-player online game **World of Tanks**, the main sponsor of an exciting new exhibition at **The Tank Museum**. Turn to page 38 for more information or visit [worldoftanks.com](http://worldoftanks.com).





# MYTH **VS** MACHINE TIGER

**28** Uncover the technology and devastating tactics behind this iconic German heavy tank

## Frontline

### **14** **1812 March to Moscow**

Napoleon's ill-fated invasion of Russia was a long, bloody and pivotal campaign

### **16** **Path to destruction**

This famous graphic charts the route, losses and freezing temperatures during the French campaign

### **18** **Battle of Berezina**

During the desperate retreat, French forces face defeat at the hands of a pursuing Russian army

### **20** **Blades & guns**

Cutting-edge firearms and more antiquated melee weapons were crucial to Napoleonic warfare

### **22** **Napoleon's great escape?**

The French defeat was not as final as many think

### **24** **In the ranks**

Men from across the continent were recruited into the Grande Armée and Russian forces

### **26** **Heroes & commanders**

Men and officers from both sides distinguished themselves on campaign

## Subscribe

**40** Never miss an issue, get **History Of War** before it's available in the shops and save a bundle while you're at it

## **D-DAY BASTOGNE AND BEYOND**

**48** David Teacher MBE discusses his incredible experiences serving in the Allied Expeditionary Force





# MIDWAY

**58** Discover how the US Navy turned the tide in the Pacific in this crushing combined-arms clash



## 06 WAR IN FOCUS

Stunning imagery from throughout history

## 28 Myth vs Machine: Tiger

Delve into the genius technology and real battlefield record of this iconic vehicle

## 42 Mercenary menace

John Hawkwood made his name fighting in the free companies of medieval Italy

## 48 D-Day, Bastogne & beyond

British veteran David Teacher MBE shares his thrilling wartime experiences

## 58 GREAT BATTLES

### Midway

Explore how this combined-arms clash that sunk Japan's ambitions in the Pacific

## 68 VICTORIA CROSS HEROES

### Charles Heaphy

This British colonial soldier found fame on the front line of the New Zealand Wars

## 72 BRIEFING

### South Sudan

The brutal birth of this African nation has tragic and divisive roots

## 78 Syria: A conflict explored

A preview of IWM London's new exhibition

## 86 OPERATOR'S HANDBOOK

### Westland Wasp

Take a look inside this aerobatic workhorse of the British forces

## 92 Reviews

A look at the latest military history titles awaiting you on the shelves

## 98 ARTEFACT OF WAR

### Boar War game of chance

A rare 19th-century children's game



## SOUTH SUDAN'S

# BRUTAL BIRTH

**72** Africa's newest country has emerged in the throes of a tragic civil war, fuelled by tribal and religious divisions

## JOHN HAWKWOOD MERCENARY MENACE

**42** An Englishman who found fame in Italy's wars





# **WAR**<sub>in</sub> **FOCUS**

## **G.I.'S ARE A GIRL'S BEST FRIEND**

*Taken: c. February 1954*

Marilyn Monroe poses atop the turret of an American tank while on her visit to Korea in 1954. During her four-day visit, for which she interrupted her honeymoon with husband Joe DiMaggio, the New York Yankees baseball star, Monroe performed ten shows for thousands of troops.











**WAR<sub>in</sub>**  
**FOCUS**  
**A DEAD END**

*Taken: c. 2001*

Angolan government soldiers stand guard at a roadblock marked with a human skull. After Angola gained independence from Portugal in 1975, civil war erupted between the ruling party, the Popular Movement for the Liberation of Angola (MPLA), and the National Union for the Total Independence of Angola (UNITA).

The 27-year civil war killed half a million people.









## **WAR<sup>in</sup> FOCUS**

### **LAST ORDERS**

*Taken: 10 December, 1944*

Pilots of a Special Attack Unit drink a glass of saké before commencing their attacks during the Battle of Leyte Gulf. Considered to be one of the largest naval clashes in history, the battle effectively ended the Japanese occupation of the Philippines. Kamikaze attacks were launched during the final stages and succeeded in destroying the US carrier *St. Lo* in October.











# WAR<sup>in</sup> FOCUS

## OPERATION WELCOME HOME

Taken: **10 June 1991**

A Navy A-7 Corsair jet is pulled down Broadway Avenue with sailors rejoicing on its wings during the Operation Welcome Home parade held to celebrate the return of Gulf War troops. An estimated 1 million people came to welcome 24,000 Desert Storm veterans. During the seven-month campaign the Iraqi Army was driven out of Kuwait by a coalition led by the US.







## TIMELINE OF THE...

# 1812 MARCH TO MOSCOW

Napoleon Bonaparte's invasion of the Russian Empire was one of the largest in military history but it ended in frozen disaster

Until the Battle of the Somme in 1916, the carnage at Borodino was the worst single day's fighting in history

### BATTLE OF BORODINO

The Russians were finally forced to fight at Borodino, although Napoleon could only muster 128,000 men. The battle was a pyrrhic victory for the French, and the total casualties for both sides were possibly as high as 86,000.

June 1812

### CROSSING THE NIEMEN

Emperor Napoleon I's Grande Armée of 450,000-600,000 men crossed the River Niemen into Russian territory, but by September hundreds of thousands of men had already died due to the already harsh campaigning conditions.

As well as French troops, Napoleon commanded men of many different nationalities, including 95,000 Poles and 81,000 Germans



16-18 August 1812

### BATTLE OF SMOLENSK

Napoleon attempted an ambitious manoeuvre to force the Russian Army into a pitched battle, but the result was a costly attack on the walls of Smolensk. The Russians eventually evacuated the city.

Napoleon before a burning Smolensk. Although the Grande Armée captured the city, the Russians were able to slip away



7 September 1812

14 September-19 October 1812

### CAPTURE AND FIRE OF MOSCOW

After Borodino, Napoleon occupied Moscow but the Russians deserted and then burned their ancient capital to deny the Grande Armée shelter, supplies and a glorious victory. Morale plummeted among the emperor's troops.

Right: The 'Fire of Moscow' destroyed approximately 75 percent of all properties in the city. Although the city's population had mostly departed, at least 12,000 people died in the fire





**"THE BATTLE WAS A PYRRHIC VICTORY FOR THE FRENCH, AND THE TOTAL CASUALTIES FOR BOTH SIDES WERE POSSIBLY AS HIGH AS 86,000"**



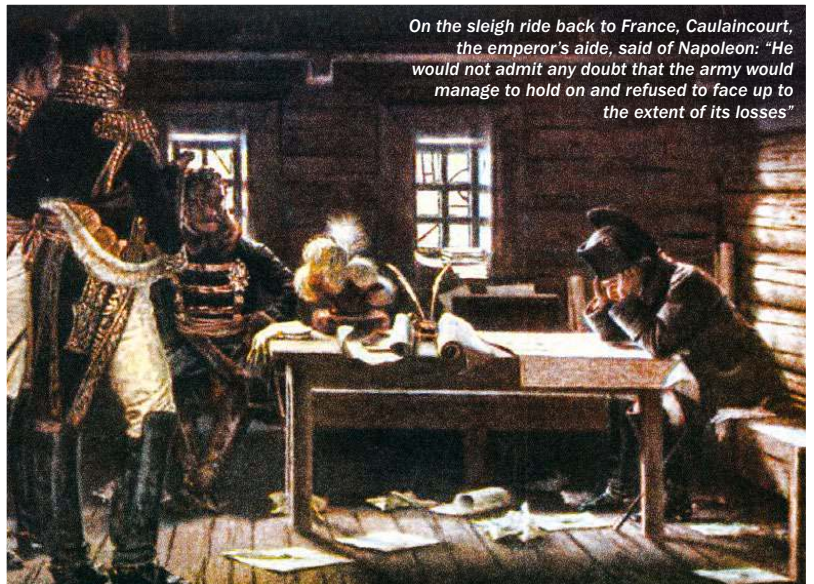
## BATTLE OF BEREZINA

The remnants of the Grande Armée were almost trapped on the banks of the River Berezina but courageous work by Dutch engineers enabled thousands to cross hastily constructed pontoon bridges.

*Left: Although many members of the Grande Armée were able to cross the Berezina, many camp followers refused to cross the bridges and thousands were subsequently massacred by Cossacks*

## NAPOLEON LEAVES THE GRANDE ARMÉE

Shortly after Berezina, Napoleon left his own army to return to Paris and reassert control over central Europe by raising a new force to defeat the Russians. By now his troops were more concerned with survival than their emperor's departure.



*On the sleigh ride back to France, Caulaincourt, the emperor's aide, said of Napoleon: "He would not admit any doubt that the army would manage to hold on and refused to face up to the extent of its losses"*

October-December 1812

26-29 November 1812

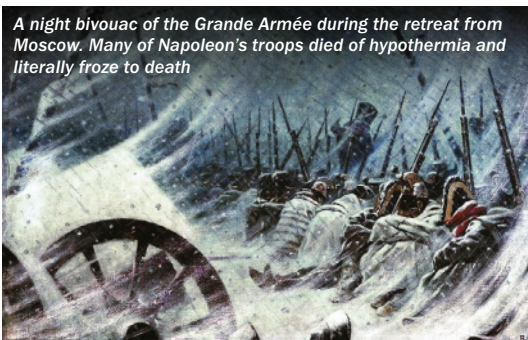
5 December 1812

December 1812

## RETREAT FROM MOSCOW

The Grande Armée retreated from Moscow and took the road back to friendly territory via Borodino but discipline largely collapsed. Thousands notoriously died of malnutrition and the extreme cold of the Russian winter.

*A night bivouac of the Grande Armée during the retreat from Moscow. Many of Napoleon's troops died of hypothermia and literally froze to death*



*In 2002, municipal workers discovered a mass grave of Grande Armée soldiers on the outskirts of Vilnius. In 1812, frozen corpses were reputedly piled three storeys high*

## ENDGAME AT VILNIUS

The pitiful remains of Napoleon's once feared force trudged into the nearest friendly outpost, which was the Lithuanian capital. However, the city could not cope with the frenzied troops. After a chaotic evacuation the Russians captured Vilnius.



# PATH TO DESTRUCTION

How a civil engineer's ingenious map charted the Grande Armée's demise

**T**he French invasion of Russia formed the basis of the "best statistical graphic ever created" by civil engineer Charles Joseph Minard in 1869. The map represented the demise of Napoleon's troops using numbers, distance, locations, coordinates, direction of travel and, most significantly of all, temperature.

## 1 BATTLE OF SALTANOVKA

23 JULY 1812 **NEAR MOGILEV, BELARUS**

Saltanovka (also known as Mogilev) is the first significant fighting during the campaign. It is a minor French victory that prevents Bagration's 2nd Army from moving north to join Barclay de Tolly's 1st Army.

## 2 BATTLE OF BORODINO

7 SEPTEMBER 1812 **BORODINO, RUSSIA**

Napoleon's poor performance here denies the Grande Armée a decisive victory and is one of the bloodiest battles in history. Despite their narrow defeat, the Russian impulse to defend their homeland intensifies.

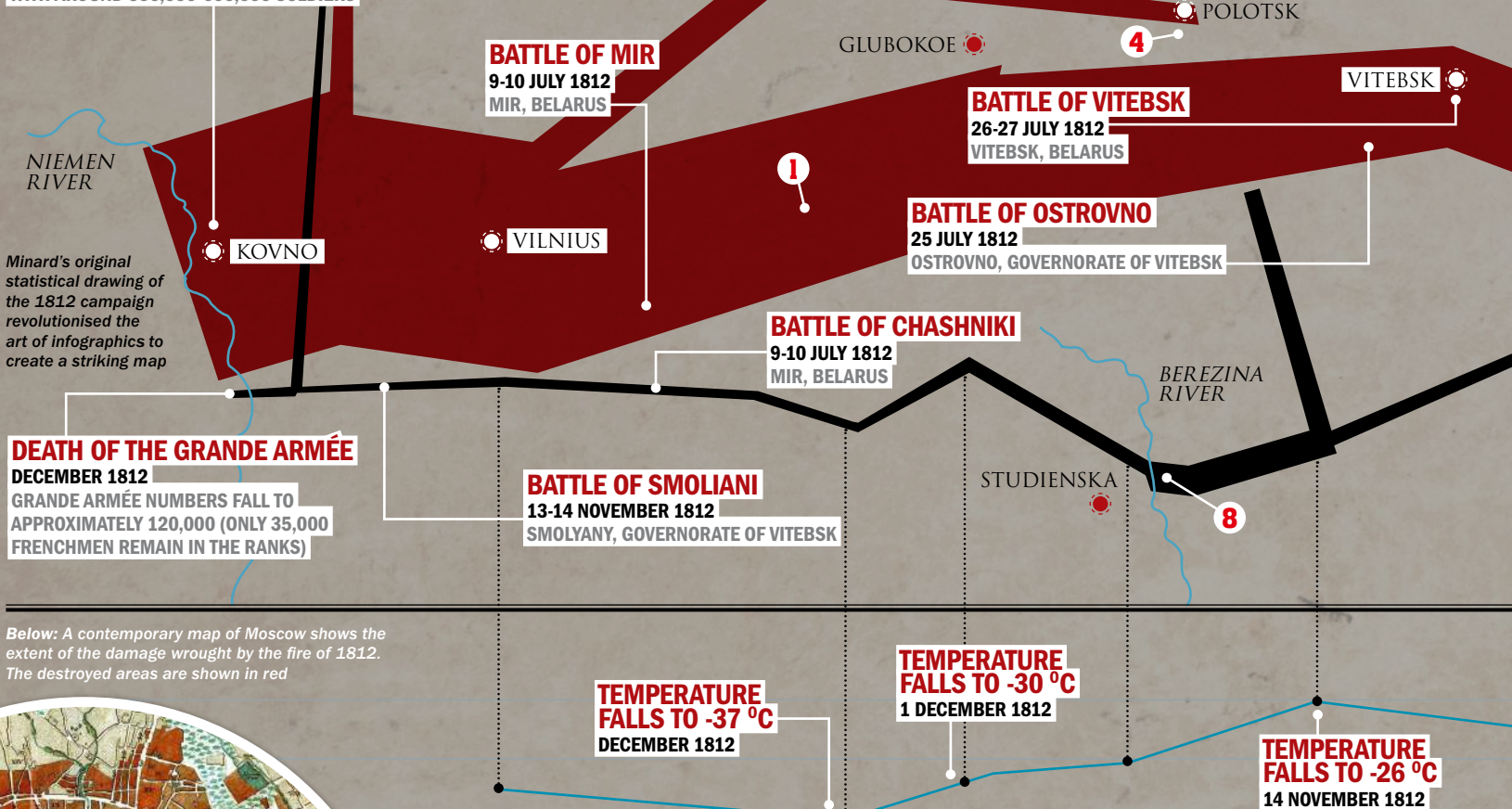


General Nikolay Raevsky leads his men into combat at the Battle of Saltanovka. Raevsky survives and the Russians name the main redoubt at Borodino in his honour

### CAMPAIGN BEGINS

JUNE 1812

THE GRANDE ARMÉE BEGINS THE CAMPAIGN WITH AROUND 550,000-600,000 SOLDIERS



Minard's original statistical drawing of the 1812 campaign revolutionised the art of infographics to create a striking map

### DEATH OF THE GRANDE ARMÉE

DECEMBER 1812

GRANDE ARMÉE NUMBERS FALL TO APPROXIMATELY 120,000 (ONLY 35,000 FRENCHMEN REMAIN IN THE RANKS)

Below: A contemporary map of Moscow shows the extent of the damage wrought by the fire of 1812. The destroyed areas are shown in red



## 3 OCCUPATION OF MOSCOW

14 SEPTEMBER-19 OCTOBER 1812 **MOSCOW, RUSSIA**

Napoleon's pyrrhic capture of the ancient Russian capital witnesses an empty city, looting and a devastating fire. The French are sent the clearest message that there will be no negotiations.

## 4 SECOND BATTLE OF POLOTSK

18-20 OCTOBER 1812 **POLOTSK, BELARUS**

The Russians defeat General Laurent Saint-Cyr at Polotsk. This action destroys Napoleon's northern flank in Belarus and helps enable three Russian armies to eventually converge on the Grande Armée at the River Berezina.





Left: The Battle of Maloyaroslavets marks the irreversible military decline of the Grande Armée and sets a bad precedent for the retreat from Moscow

## 5 BATTLE OF MALOYAROSLAVETS

24 OCTOBER 1812 **MALOYAROSLAVETS, RUSSIA**

This important battle disrupts Napoleon's original plans for the retreat from Moscow. A vicious fight occurs at the town of Maloyaroslavets but the Russians are able to continue harassing the Grande Armée afterwards.

## 6 BATTLE OF VYAZMA

3 NOVEMBER 1812 **VYAZMA, RUSSIA**

Vyazma is a serious Russian attack on the retreating Grande Armée. The French are attacked half way along their overstretched line, with the greatest fighting occurring in the rearguard. 5,000 French are killed and morale plummets.

### FORCE WEAKENS

6 SEPTEMBER 1812

GRANDE ARMÉE NUMBERS ARE SEVERELY DEPLETED BEFORE BORODINO

### THE GRANDE ARMÉE OCCUPIES MOSCOW

18 OCTOBER 1812  
MOSCOW, RUSSIA

MOSCOW

**"THE FRENCH ARE ATTACKED HALF WAY ALONG THEIR OVERSTRETCHED LINE, WITH THE GREATEST FIGHTING OCCURRING IN THE REARGUARD. 5,000 FRENCH ARE KILLED AND MORALE PLUMMETS"**

### BATTLE OF KYLASTITSY

28 JULY-1 AUGUST 1812  
KYLASTITSY, BELARUS

DOROBOY

SMOLENSK

ORSCHA

DNIEPER RIVER

MOHILOW

### BATTLE OF VALUNTINO

18 AUGUST 1812  
NR SMOLENSK, RUSSIA

### BATTLE OF SMOLENSK

16-18 AUGUST 1812  
SMOLENSK, RUSSIA

## 7 BATTLE OF KRASNOI

15-18 NOVEMBER 1812 **KRASNOY, RUSSIA**

Kutuzov claims a great victory as the French suffer heavier losses than the Russians. Although the French manage to escape, Krasnoi continues the slow destruction of the Grande Armée.

Right: The courageous retreat of Marshal Ney's rearguard at Krasnoi. 'General Winter' is an arguably more deadly enemy than the Russians



TEMPERATURE FALLS TO -11 °C  
9 NOVEMBER 1812

## 8 BATTLE OF BEREZINA

26-29 NOVEMBER 1812 **BEREZINA RIVER, BARYSAW, BELARUS**

Trapped by Russian armies on the Berezina River, this battle is the last 'success' of the Grande Armée during 1812. Its remnants manage to escape across hastily constructed pontoon bridges and continue marching west to relative safety.



-13 °C  
-25 °C  
-37 °C

TEMPERATURE

Left: Polish lancers play a key role in Napoleon's Russian campaign  
Images: Alamy



# FAMOUS BATTLE BEREZINA

Napoleon's retreat had become desperate as one potential escape route after another was closed. By mid-November, there was just one chance to reach Poland – by crossing the Berezina River at Borisov

**T**he savagely cold weather that had been plaguing the retreat ought now to have worked in favour of the exhausted French. The Berezina would normally be frozen that late in the year, which would make crossing easier. An unexpected thaw, however, scotched that possibility, leaving the bridge at Borisov as the sole remaining option.

The bridge was held by a small French corps commanded by General Dombrowski, but on 21 November they were driven away by superior Russian forces under Admiral Chichagov, who then crossed the bridge to the east side of the river. With General Wittgenstein closing in with another Russian army, and Marshal Kutuzov also expected to arrive soon, the situation for

Napoleon was dire. Two days later, Chichagov was forced back over the Berezina, but was able to destroy the bridge as he withdrew, apparently trapping the French army on the east side of the river as superior Russian forces closed in.

By luck, the French then discovered a ford where the army's engineers might be able quickly to throw up a bridge. The trick would be distracting the Russians while the bridge was built. In order to pull this off, Napoleon staged a number of diversions to the south. Chichagov took the bait and moved most of his men to cover the suspected French crossing, allowing French engineers to throw up two bridges, one for infantry and one for artillery.

Despite the desperate nature of the situation, the crossings were thoroughly planned, with

army units scheduled to go over during the day and civilians (of which there were thousands) at night. The infantry bridge, completed by 1pm on 26 November, was weak, but enabled the first Frenchmen to cross and form a bridgehead. Marshal Oudinot, with the French II Corps, then pushed south to drive Chichagov further away. That night, III Corps, under Marshal Ney, crossed, with the Polish V Corps following.

Artillery had also started to cross the sturdier second bridge around 3pm that afternoon, but the bridge collapsed five hours later and had to be rebuilt; in the freezing conditions, the engineers of General Eblé's corps suffered horribly as they hurried to fix the only escape.

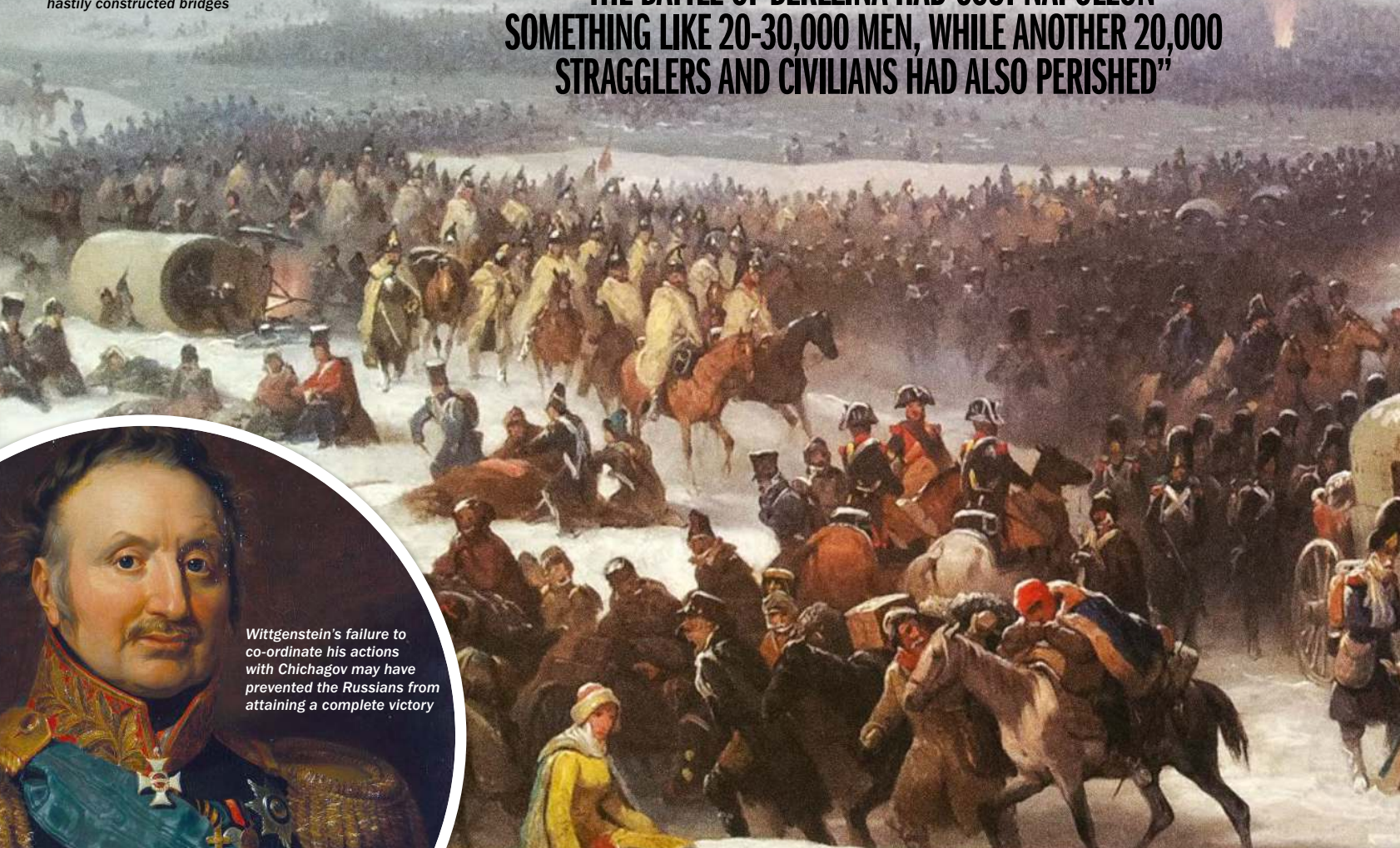
The following day, more units made it across the river, although the army stragglers and

*The remnants of Napoleon's army cross the Berezina on two hastily constructed bridges*

**"THE BATTLE OF BEREZINA HAD COST NAPOLEON SOMETHING LIKE 20-30,000 MEN, WHILE ANOTHER 20,000 STRAGGLERS AND CIVILIANS HAD ALSO PERISHED"**



*Wittgenstein's failure to co-ordinate his actions with Chichagov may have prevented the Russians from attaining a complete victory*



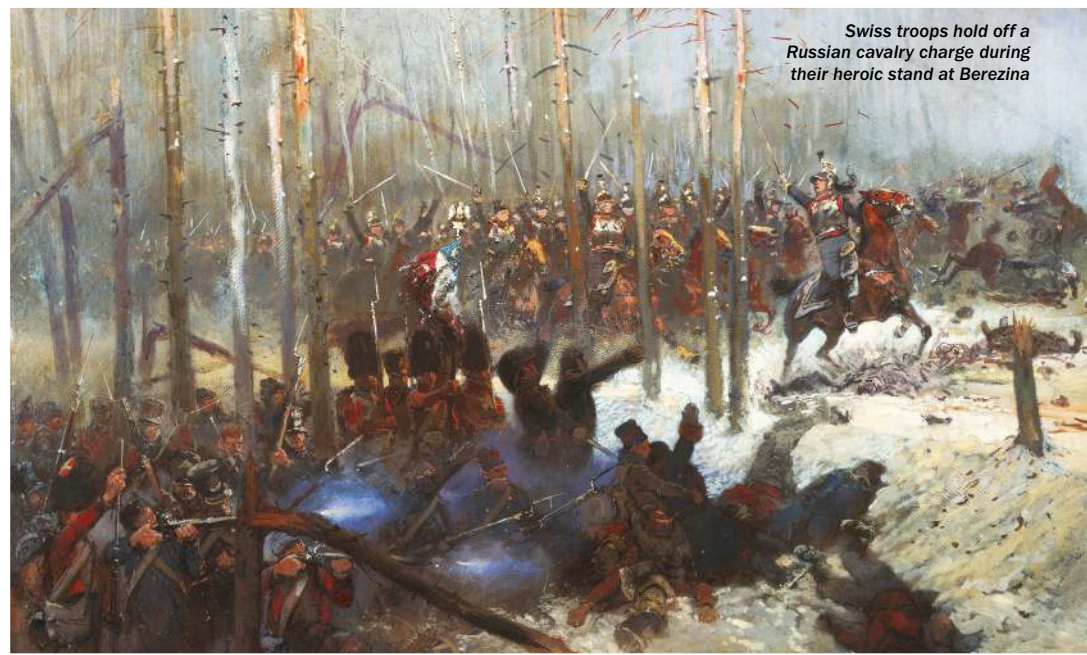


civilians proved unwilling to cross under cover of darkness, preferring to wait on the east bank. As events played out, they would wait there until it was too late to cross.

By 28 November, the Russians were ready to intervene, with the hope of completely smashing the remnants of Napoleon's Grand Armée. Chichagov advanced against the bulk of the army on the western side of the river while Wittgenstein tackled the rearguard, commanded by Marshal Claude Victor-Perrin, on the east. Launching 25,000 of his men against around 19,000 French, Chichagov appeared to be on the verge of success when a charge by Polish lancers and French cuirassiers stopped the Russians' momentum and let the French hold out till nightfall.

Strangely, Wittgenstein employed only a fraction of his men in his attack on the east bank – around 14,000 out of 45,000. Despite this, the situation was so grim that Napoleon actually sent a division back across the Berezina. In desperate fighting, the rearguard held firm, but Russian artillery sparked a panic among the army stragglers, who stampeded and caused the artillery bridge to collapse again.

At around 7pm on the evening of 28 November, the last units were ordered to cross the river and then burn the bridges in order to halt the Russians' pursuit. Tragically, the panicked civilians could still not be convinced to cross, and only tried to do so when the bridges had been set on fire, resulting in thousands of needless deaths.



Swiss troops hold off a Russian cavalry charge during their heroic stand at Berezina

The Battle of Berezina had cost Napoleon something like 20-30,000 men, while another 20,000 stragglers and civilians had also perished. It would normally have been considered a terrible defeat, but by getting a remnant of the Grand Armée across the river, he had at least preserved a foundation stone upon which a new army could be built.

## THE SWISS STAND FIRM

**MANY NATIONALITIES FOUGHT FOR NAPOLEON DURING THE RUSSIAN CAMPAIGN, NONE WITH MORE COURAGE THAN THE SWISS INFANTRY SHOWED AT BEREZINA**

The Swiss that fought under the French colours at Berezina played a key role in allowing the army to cross the river. They had suffered greatly during the Russian campaign, with around 6,700 of the original 8,000 already lost before the bedraggled army reached the Berezina.

As part of the French II Corps they then had to hold back Chichagov's army to give the bulk of the French forces time to cross the river. Often having to resort to bayonet charges in order to keep the Russians at bay, and with ammunition in scarce supply, the Swiss somehow held the left flank of the French position. Repeatedly driven back, they managed to respond each time, but at a terrible cost. Only 300 Swiss troops survived the battle.

Adding insult to injury, in the chaos of the retreat records were lost and most of the 1,000 or so men who died holding back Chichagov's army were simply classed as disappeared, rather than officially dead. As late as 30 years after the battle, requests were still being made for information on the fate of soldiers involved in the savage action. Little wonder, then, that 'Berezina' became adopted by French-speakers as a synonym for 'disaster'.

**“REPEATEDLY DRIVEN BACK, THEY MANAGED TO RESPOND EACH TIME, BUT AT A TERRIBLE COST. ONLY 300 SWISS TROOPS SURVIVED THE BATTLE”**





# BLADES & GUNS

The bloody business of early 19th-century warfare spawned a range of weaponry, most of which were common across all nations

## THE CARBINE

This was a versatile weapon, which found employment with all of the armies in the Napoleonic period. Shorter than the musket (much shorter in the case of some British and Austrian models), it was often issued to light cavalry to aid in skirmishing duties, such as with the flankers in Russian hussar regiments and French *chasseurs à cheval*.

### ★ THE FURNITURE

Made of brass, the carbine's furniture was usually on a smaller scale than that of a regular musket, but otherwise identical. Some models employed pistol furniture.

### ★ THE STOCK

The stock would often be thinner – and therefore lighter – than those found on regular muskets, making this a handier weapon for light cavalry and skirmishers.

**Right:** The carbine was originally a regular musket with a cut-down barrel. Later developments saw a smaller calibre size adopted, with varying barrel lengths, as short as 16 inches in some cases

### ★ THE BARREL

The relative shortness of the carbine barrel made the weapon lighter and easier to handle, but also impacted negatively on range and accuracy (few were rifled). The French tended to opt for longer carbine models, frequently giving them an advantage.

### ★ THE RAMROD

Thanks to its smaller size, the carbine could theoretically be loaded and fired while on horseback, but it was standard practice to dismount to engage the enemy.

**“IT PACKED A FEARSOME PUNCH WHEN IT FOUND ITS TARGET, THE SOFT LEAD BALLS FLATTENING ON IMPACT TO INFLECT SERIOUS WOUNDS”**

**Right:** The most famous rifle of the era, the British Baker Rifle, shared characteristics (including a shortened barrel) with most models of the time

## THE RIFLE

The best marksmen in each Russian light infantry company (as well as a portion of men in a heavy cavalry squadron) would be equipped with rifles, the improved accuracy of which was down to the grooves carved inside the barrel. The same rifling made the weapon slower to load than a musket, and rendered riflemen vulnerable once they had fired.

## THE MUSKET

The most common Napoleonic weapon, the humble musket was slow to load and famously inaccurate, requiring a lengthy process to be fired in volleys. However, it packed a fearsome punch when it found its target, the soft lead balls flattening on impact to inflict serious wounds.

**Left:** The French Musket Model 1777 replaced the earlier Charleville (many of which were sent to America during the War of Independence)

**Left:** The Baker rifle was an incredibly accurate weapon



*Below: A straight sabre, favoured by French heavy cavalry units*



## THE SABRE

Opinion differed on whether the sabre was most effective when used as a thrusting weapon, or when used to slash an opponent (often a fleeing infantryman who would be ridden down from behind). French heavy cavalry favoured straighter blades for thrusting, while light units were equipped with curved blades for slashing.



*Russian cannon in action at the Battle of Borodino, during the Russian campaign*

## 12-POUNDER FIELD ARTILLERY

This would normally be the largest gun employed in the field, with anything larger usually kept for garrison or siege use. With a smoothbore barrel, it normally fired a solid iron 'roundshot', but could be switched to canister or 'case shot' at close range.

## THE LANCE

The Poles were in the vanguard of the lance's renaissance in the late 18th century, and the weapon was featured in all Napoleonic armies, often wielded by Polish cavalymen. Measuring up to three metres in length, they were used in charges, but discarded in preference of sabres during close-quarter combat.



**"FRENCH HEAVY CAVALRY FAVOURED STRAIGHTER BLADES FOR THRUSTING, WHILE LIGHT UNITS WERE EQUIPPED WITH CURVED BLADES FOR SLASHING"**

*Left: Lancers eschewed body armour in favour of speed, and could also be lethal against infantry, even when it formed square, due to the reach of the lance*



**"THE FACT THAT THEIR EMPEROR HAD SURVIVED, ALONG WITH THE PRECIOUS SEED (IN OFFICERS AND EXPERIENCED MEN) FROM WHICH A NEW ARMY COULD BE GROWN, WAS A MUCH MORE PALATABLE VERSION OF EVENTS"**



*Napoleon left his men in December 1812 to return to Paris to put down an attempted coup led by General Claude François de Malet*



# NAPOLÉON'S GREAT ESCAPE?

Can the retreat across the Berezina be considered a French victory, or was it merely the avoidance of total annihilation?

**T**he invasion of Russia turned into a nightmare for Napoleon's Grande Armée, but it could actually have ended on an even more downbeat note — the total destruction of the army and the capture of Napoleon. This faintest of bright spots amid the gloom of a truly disastrous campaign has sparked intense debate ever since, with historians unable to agree on whether it was a victory for the Russians or the French.

Only a fraction of Napoleon's army returned from its ill-fated Russian adventure, and the enormity of the defeat was famously depicted in the *Carte Figurative* of Charles Minard. When presented in such (literally) graphic detail, it is impossible to argue that the 1812 Russian campaign was anything other than a catastrophe, yet that unlikeliest of escapes at Berezina continues to tantalise.

An added complication is that most of the historians who have written about the campaign have shared the same weakness — an inability to read Russian. This, coupled with a far more common proficiency in French, means that the use of eye-witness accounts is inevitably skewed. A story has emerged of a superior French Army being defeated by geography and weather rather than the effective strategy and tactics of its opponent. For propaganda purposes, the French were desperate to salvage whatever dignity they could from the disaster. The fact that their Emperor had survived, along with the precious seed (in officers and experienced men) from which a new army could be grown, was a much more palatable version of events.

As well as the debate over whether this constituted a victory, a fascinating 'what if' hangs over the Battle of Berezina. What if Napoleon had been captured and his army totally destroyed? The following campaigns, including such battles as Lutzen and Leipzig, would not have needed to be fought, as France could not have continued without its driving force.

Even then, the end of the war might still have been familiar. Had Napoleon been exiled a year earlier, he might simply have escaped a year earlier. Waterloo, or something similar, might

have been fought in 1814 instead of 1815, the year of his flight from the island of Elba.

The idea, however, that the war was in any doubt following the retreat from Moscow does not survive scrutiny. Napoleon was finished, even though it would take many months of hard campaigning for it to become apparent. The new army he raised was a pale imitation of the Grand Armée he had driven to its destruction in Russia.

Nor can the Russians be dismissed as lucky bystanders as first the summer and then the winter drained the French Army of men and horses. This idea is countered by the fact that Russian military losses were almost as great as those of the French. They had played a careful game, avoiding battle and drawing the French Army deeper into Russia, which denied Napoleon his goal — a quick, overwhelming military success, the destruction of the Russian Army and enforced negotiations with the Tsar. Napoleon had grown increasingly frustrated with this strategy, once haranguing a Russian general (Balachov) over his country's refusal to stand and fight. On more than one occasion, in the words of historian Steven Englund, Napoleon's men were left to "gape in astonishment at the empty spot that a Russian Army had just evacuated".

Russian tactics had changed once their enemy began to retreat and there is room for debate on the performance of their armies, at Berezina in particular, when more co-operation and energy might have closed the escape route. However, the idea that they somehow allowed Napoleon to get away strays into the realm of conspiracy theories.

The French were beaten by a superior strategy, one to which Napoleon, curiously lethargic for most of the campaign, failed to adapt. It is ironic that, in a campaign with such lofty ambitions, Napoleon only really roused himself when the game was up and only a tiny part of his army remained. Nevertheless, his performance at the Berezina, marked by boldness and decisiveness in equal measure, was a reminder of what a great general he was when on the top of his game. It was a sort of victory, allowing part of his army to escape. But the escape was only temporary.

*A dispirited Napoleon retreats from Moscow alongside his men. Of the 600,000 men that marched into Russia, only 100,000 returned*

Image: Getty



# IN THE RANKS

In some of the most brutal conditions experienced during the Napoleonic Wars, the common soldier was pushed to the limit

**T**he invasion of Russia was a massive logistical exercise, and in order to gather an army large enough for the monumental task Napoleon had to cast his net across much of Europe. Russia responded by drawing manpower from its own massive population, which was double that of France.

## 1ST POLISH LIGHT CAVALRY REGIMENT OF THE IMPERIAL GUARD

POLAND'S TROUBLED HISTORY HAD SEEN ITS BORDERS CONTRACT, EXPAND AND EVEN DISAPPEAR, BUT ITS FIGHTING MEN WERE ALWAYS IN DEMAND

Poles served in many armies of the Napoleonic Wars, with the eye-catching lancers grabbing most of the plaudits. The ancient lance had largely disappeared from the battlefield over the preceding centuries, but Polish 'Uhlans' had kept faith with the elegant weapon and their performance across Europe convinced many to reintroduce their own lancer regiments.

The 1st Polish Light Cavalry Regiment of the Imperial Guard was formed on 9 April 1807, by order of Napoleon himself. The regiment had a paper strength of 776 troops in eight companies, but this was to increase

steadily. Horses were stipulated to be no more than four feet nine inches in height, which today would qualify them as ponies rather than horses.

The regiment was originally armed with sabres, but in 1809 lances were adopted with the help of training from the 1st Regiment of Lancers of the Vistula (another Polish unit). The lance was 2.75 metres long and was topped with a crimson and white pennon. The regiment served with distinction during the Moscow campaign but suffered horrendous losses. By the end of the campaign it was worn down to less than half of its original strength.

## FRENCH ARTILLERYMAN

THE MOST REVERED BRANCH OF THE SERVICE, THE ARTILLERY ATTRACTED THE BRIGHTEST MINDS THANKS TO ITS DEVOTION TO MATHEMATICS AND SCIENCE

As a former artillery officer, Napoleon always had a special affection for his guns, and his use of them on the offensive (gathered together in massed batteries) was often devastating. The ratio of guns to infantry increased steadily during the war to compensate for the enlistment of inferior soldiers, with the number of companies per artillery regiment expanding from 20 to 28. By 1812, nine regiments of Foot Artillery were supplemented by six Horse Artillery regiments, a huge concentration of firepower.



*Relying on speed and mobility to defeat his enemies, Napoleon insisted on using light, moveable cannon*





Illustrations: Jean-Michel Girard - The Art Agency

## DON COSSACK

UNPREDICTABLE AND TEMPERAMENTAL, COSSACKS RAILED AGAINST AUTHORITY, BUT PROVIDED SOME OF THE BEST LIGHT CAVALRY OF THE NAPOLEONIC WARS

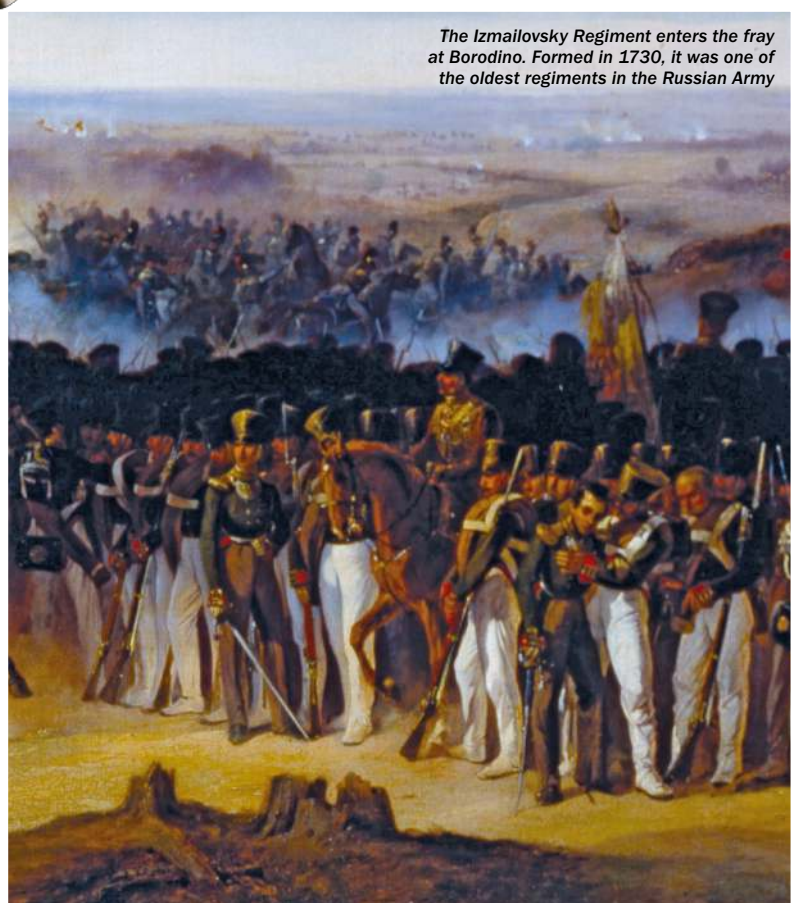
One of the most infamous names in military history, 'Cossack' covers a wide range of peoples, known as 'hosts', who forged their formidable reputation in border fighting with Tartar warriors. The Don Cossacks were the predominant faction in the Russian Imperial Army, best suited to reconnaissance and scouting but deadly when unleashed to harry a defeated foe. Fiercely independent (their name is a corruption of the Turkic word for 'freeman') they were usually armed with a sword ('shashka') and a long spear.

**"THE DON COSSACKS WERE THE PREDOMINANT FACTION IN THE RUSSIAN IMPERIAL ARMY, BEST SUITED TO RECONNAISSANCE AND SCOUTING BUT DEADLY WHEN UNLEASHED TO HARRY A DEFEATED FOE"**

## RUSSIAN IMPERIAL GUARDSMAN

WITH THEIR ARISTOCRATIC OFFICERS AND SELECTED MEN, THE RUSSIAN GUARDS WERE RECOGNISED AS THE FINEST-LOOKING TROOPS IN EUROPE

Originally formed in the 1690s and recognised as the elite of the Russian Army, the 'Leib Guard' numbered six infantry regiments in 1812, organised into three brigades. The quality of the men was such that impressive NCOs could find themselves elevated to the officer ranks in a regular regiment. At Borodino they formed the V (Guard) Infantry Corps, which included an artillery brigade and a Cuirassier division. The corps performed with such distinction it was awarded the St. George's Colour.



The Izmailovsky Regiment enters the fray at Borodino. Formed in 1730, it was one of the oldest regiments in the Russian Army

Images: Alamy, Getty



# HEROES & COMMANDERS OF 1812

The French invasion of Russia revealed significant flaws in the respective commanders-in-chief but often great virtues in their subordinates

## PYOTR BAGRATION

THE AGGRESSIVE GEORGIAN PRINCE  
YEARS: 1765-1812 COUNTRY: RUSSIA

A member of the Georgian royal family, Prince Bagration joined the Russian army in 1782 and was the subordinate commander to Generalissimo Alexander Suvorov during the Italian and Swiss expeditions of 1799-1800. He gained further experience fighting at the battles of Ulm, Austerlitz, Eylau and Friedland. Bagration's relationship with Tsar Alexander I was strained but in 1812, he was appointed to command Russia's 2nd Army.

The prince vigorously advocated fighting the Grande Armée in open battle but this clashed with Barclay de Tolly's policy of making the French march deeper into Russian territory. Bagration's frustration led him to actively campaign to remove Barclay from command but he also won victories on the retreat towards Moscow. After fighting the Grande Armée to a draw at the Battle of Mogilev and a failed counterattack at Smolensk, Bagration commanded the left wing at the Battle of Borodino where he was mortally wounded and eventually died of an infected wound on 24 September 1812.

*Despite being popular among his troops and a talented battlefield commander, Bagration lacked strategic grasp and his animosity towards Barclay de Tolly was arguably misguided*

## NAPOLEON BONAPARTE

THE OVERAMBITIOUS BUT LACKLUSTRE EMPEROR YEARS: 1769-1821 COUNTRY: FRANCE

At the beginning of 1812 Napoleon, the former Corsican artilleryman, was at the peak of his powers. He had become emperor of the French and the 'Master of Europe' through a series of brilliant victories and campaigns including the Battle of Austerlitz in 1805 where he defeated the Austrians and Russians. Among the losers of this battle were Mikhail Kutuzov and Tsar Alexander I himself, so for the next seven years Napoleon believed he could bend the Russians to his will. He was gravely mistaken and when Alexander refused to blockade Britain along with Napoleonic Europe, the emperor arguably made his first strategic mistake by letting his pride overrule sense and he invaded Russia.

Unlike his previous campaigns, Napoleon made continual mistakes in Russia that cost him and his huge army dear. By taking the bait of following Barclay de Tolly's, and then Kutuzov's, army deeper into Russian territory, his own supply lines became dangerously overstretched. At Borodino, one of the bloodiest battles in history, the emperor was in uncharacteristically bad form and spent most of the day sitting in a chair looking through a telescope. A staff officer observed, "We were all surprised not to see the active man of Marengo, Austerlitz etc. We did not feel satisfied; our judgements were severe."

Following the Pyrrhic victory, Napoleon captured Moscow but was then humiliated when he saw it burned by its own inhabitants, denying him supplies and glory. Now losing the initiative he would not give up having an "extraordinary blind faith in his own star" but Moscow had to be abandoned

and the subsequent retreat was a disaster. Even the emperor was forced to exchange his famous bicorne hat in favour of Polish winter clothing but he occasionally showed flashes of his old genius, particularly at the Berezina. However, Napoleon eventually abandoned his own army to die and took a fast sleigh back to Paris, blaming everyone but himself for the disaster.

*Napoleon near Borodino. The emperor seemed distracted while the battle raged nearby, prompting several to observe that this was not the dynamic man who had made Europe tremble*







Kutuzov lost an eye in combat in 1774 and was known for his drinking and womanising but he was also cunning and knowledgeable

## MIKHAIL KUTUZOV

THE SLUGGISH VICTOR OF 1812 YEARS: 1745-1813 COUNTRY: RUSSIA

Kutuzov became an artilleryman at the age of 14 and saw extensive action in campaigns against Turkey. After some time as a diplomat he commanded 55,000 troops in 1805 but he was made a scapegoat by Tsar Alexander I for the disastrous coalition defeat at Austerlitz. However by 1812 the situation was so grave that Alexander belatedly appointed him as commander-in-chief of the Russian forces to replace Barclay de Tolly.

Despite replacing Barclay, Kutuzov largely adopted his strategy of retreating towards Moscow while simultaneously harassing the Grande Armée with minor battles. However, at Borodino Kutuzov faced his first big test and he was found wanting. The direction of the battle often fell to his subordinates and at one point Kutuzov was found picnicking with officers behind the lines. However he cunningly abandoned Moscow and then harassed the retreating Grande Armée before inflicting a defeat on them at the Battle of Maloyaroslavets. By 1813 Kutuzov had entered Poland and Prussia.

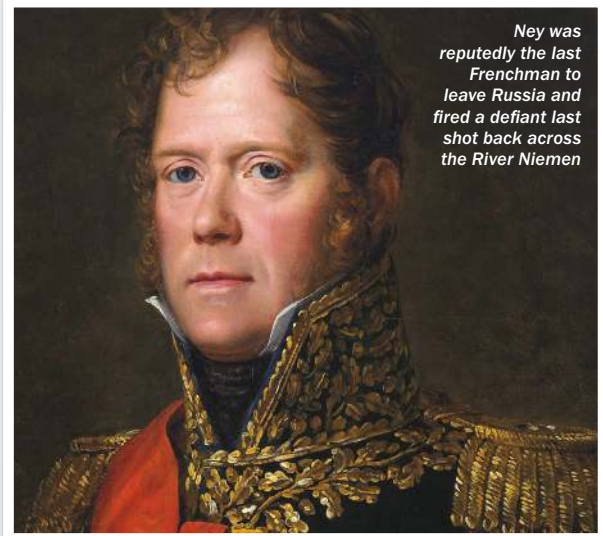
## MICHEL NEY

"THE BRAVEST OF THE BRAVE" YEARS: 1769-1815 COUNTRY: FRANCE

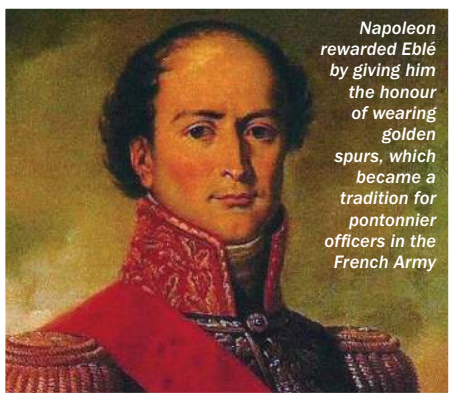
Arguably the most courageous of Napoleon's marshals, Ney was the son of a cooper but he enlisted in the French army as a hussar in 1787 and by 1796 he was a general. Initially a republican, Ney became a loyal supporter of Napoleon and in 1804 he was made a marshal of France and fought across Europe. In 1812 Ney was given command of III Corps and he especially distinguished himself during the infamous retreat.

III Corps mostly formed the rearguard of the retreat and at one point Ney's men became cut off from the main force. Despite a desperate fight and a rush across the River Dnieper, Ney managed to extricate himself with 800 men. At the Berezina he held off the Russians for a whole day and remained with the rearguard until the end of the campaign. Napoleon subsequently dubbed him the "bravest of the brave."

**"AT THE BEREZINA HE HELD OFF THE RUSSIANS FOR A WHOLE DAY AND REMAINED WITH THE REARGUARD UNTIL THE END OF THE CAMPAIGN"**



Ney was reputedly the last Frenchman to leave Russia and fired a defiant last shot back across the River Niemen



Napoleon rewarded Eblé by giving him the honour of wearing golden spurs, which became a tradition for pontonnier officers in the French Army

## JEAN BAPTISTE EBLÉ

THE SAVIOUR OF THE GRANDE ARMÉE YEARS: 1758-1812 COUNTRY: FRANCE

Eblé joined the French Army in 1793 as an artilleryman and became a general in 1794. In 1812 his specific orders were to command engineers, which included 400 Dutch soldiers who were experts when it came to constructing pontoon bridges.

In November 1812 the beleaguered Grande Armée reached the banks of the icy Berezina but the Russians blocked their way. Napoleon had ordered that all of the bridging train be destroyed but Eblé disobeyed and saved some equipment.

A ford was discovered and the pontonniers started to build three new bridges.

Eblé led by example and worked tirelessly in freezing water to successfully construct the bridges. The remnants of the army were able to continue retreating but many exhausted camp followers refused to cross the bridges, despite Eblé's attempts to convince them. Eblé was promoted to commander-in-chief of the artillery but his exertions hastened his early death by the end of the year.

## MICHAEL ANDREAS BARCLAY DE TOLLY

THE UNDERRATED RUSSIAN COMMANDER YEARS: 1761-1818 COUNTRY: RUSSIA

Born into a German-speaking family of Scottish descent in what is now Lithuania, Barclay de Tolly was something of an outsider among the Russian nobility. Nevertheless he spent almost his entire life in the Russian army, having enlisted aged only nine. By 1812 he was minister of war and a favourite of Tsar Alexander I who appointed him the commander of Russia's 1st Army and effective commander-in-chief to oppose Napoleon.

Barclay's main contribution to the 1812 campaign was pursuing a policy of avoiding pitched battles in favour of gaining time and retreating into Russia to stretch the logistical capabilities of the

Grande Armée to breaking point. This was initially highly unpopular among other senior officers and Mikhail Kutuzov replaced Barclay. However, he still retained command of 1st Army and led the right wing at Borodino where he performed well. Despite retiring from the army soon afterwards on grounds of ill-health, Barclay's strategy bore fruit and he was subsequently proclaimed a hero.

*Right: Barclay's retirement was short-lived and he was reinstated as Russian commander-in-chief. His forces entered France in 1814 and he was promoted to field marshal and made a prince*



Images: Alamy



# MYTH **vs** MACHINE TIGER

Discover the tactics, technology and battlefield record behind Germany's infamous yet iconic heavy tank

WORDS ROB SCHÄFER  
& MIKE HASKEW



Left: Rearming a Tiger I while on operations in Russia, June 1943



Left: A Panzer VI pictured on deployment in North Africa, Tunisia, 1943



Above: Tigers drive past burning villages during an offensive in the Orel region

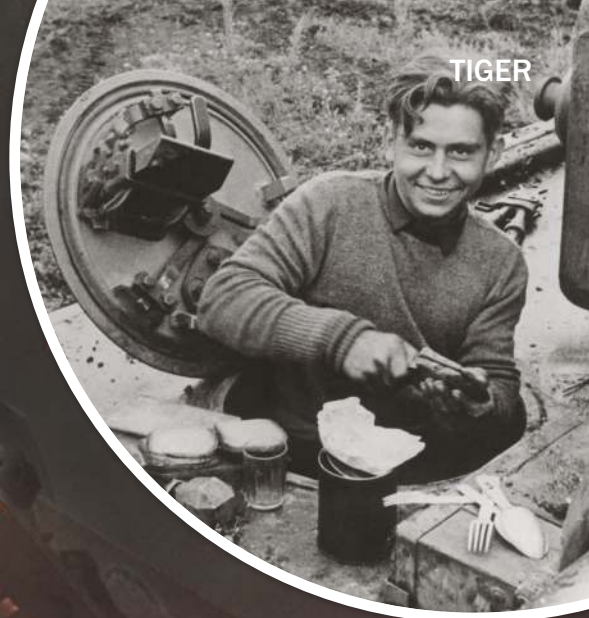


Left: The crew of a Panzer VI Königstiger spray their vehicle to blend with their surroundings





**Right:** The radio operator of a Tiger prepares sandwiches for his crew mates, Eastern Front, August 1943



Artwork from mass multi-player online game World of Tanks, main sponsor of The Tiger Collection at The Tank Museum, Bovington

**T**he Tiger – no other tank of World War II is better known. The nimbus of the infamous German heavy tank and that of its successor, the mighty King Tiger, is still unbroken and as powerful as it was 72 years ago. Today, it is still known for its fabled 'invincibility', for the power of its mighty 8.8cm gun and, especially in modern, revisionist historiography, for its legendary 'unreliability'. Yet on the Eastern Front, and to a slightly lesser extent in the western theatre of war, Tiger-equipped German units performed surprisingly well.

The true story of the Tiger is hidden somewhere between those extremes, and is best told by those who used and also faced the gigantic German war machines on the battlefield.

### THE HEAVY TANK BATTALIONS

*"A concentration of the available armoured forces will always be more effective than dispersing them, irrespective of whether talking about a defensive or*

## "THE INTRODUCTION OF THE PANZERKAMPFWAGEN TIGER PROVIDED THE GERMAN ARMY WITH A MASSIVE INCREASE IN THE COMBAT POWER OF ITS PANZER FORMATIONS"

*offensive posture, a breakthrough or an envelopment; a pursuit or a counterattack"*  
– **Generaloberst Heinz Guderian**

The introduction of the Panzerkampfwagen Tiger provided the German Army with a massive increase in the combat power of its Panzer formations. To get the most out of the new tank's capabilities and to make full use of the propaganda advantage of creating new, elite, heavy Panzer units, the Tigers were grouped into *schwere Panzer Abteilungen* (s.Pz.Abt – heavy tanks battalions). These were independent *Heerestruppen*, held at *Armee* or *Korps* level, which could be used as heavy reinforcements to be sent to wherever their firepower was needed.

Within the German Army, the use of heavy tanks in that role was not new, and had been originally formulated by Generaloberst Walther von Brauchitsch in 1938. The German offensive campaigns in 1939 and 1940 had clearly highlighted the shortcomings of the German Panzers, yet due to the spectacular successes achieved in those early campaigns, the development of heavy tanks had not been given any priority. All that changed drastically during the first weeks of Operation Barbarossa, the campaign in Russia, when German tanks were clearly outclassed by Soviet-made T-34 and KV-1 tanks.

After a hasty development phase, the Tiger made its battlefield debut in spring 1942. It



was planned to add a heavy tank company of nine Tigers to each Panzer regiment, yet it soon became clear that the tank's mass and weight opposed its use within the ranks for regular Panzer divisions, whose tactics were heavily based on speed and mobility. The key to success was found in the concentrated use of Tigers formed into independent units. Only two 'elite' German divisions, the *Panzer-Lehr-Division* and the *Panzergranadier-Division 'Grossdeutschland'*, ever received organic Tiger battalions.

### TACTICS & ORGANISATION

Initially, the organisational structure of a schwere Panzer-Abteilung was based on a mixture of Tigers operating with and supported by a number of *Panzerkampfwagen III Ausf. N*. In battle, the Tigers would engage 'hard' targets such as enemy armour and fortified positions, while the lighter Panzer IIIs, armed with a short 75mm gun, would focus on 'soft targets' – enemy infantry and anti-tank guns. This form of experimental structure was known as 'Organisation D'.

Each Tiger Abteilung was equipped with three companies of nine Tigers and ten Panzer IIIs. Added to those were two Tigers operated by the battalion's command staff and five Panzer IIIs formed into a light platoon, adding up to a total of 29 Tigers and 35 Panzer IIIs. Yet due to production and supply shortcomings, the heavy battalions usually operated with only two companies summing up to 20 Tigers and 25 Panzer IIIs.

**"IN THE LIGHT OF EXPERIENCE, IT HAD SOON BECOME CLEAR THAT THE TIGER WAS ACTUALLY AT ITS BEST IN A LONG-RANGE ENGAGEMENT OR IN A AMBUSH POSITION, PICKING OFF INCOMING ENEMY TANKS FURTHER AWAY, WITH ITS SUPERIOR GUN"**

By March 1943, combat experience had shown that the increased flexibility offered by the supporting Panzer IIIs was clearly outweighed by their heavy losses in combat, where Soviet gunners would effectively pick off the lightly armoured Panzer IIIs before turning their attention to the unsupported Tigers.

By this time, Tigers were being constructed in greater numbers, and a new organisational scheme was introduced. In this new scheme, known as 'Organisation E', the heavy tank battalions were turned into pure Tiger units, consisting of three companies of 14 Tigers each and a staff company of three Tigers.

Even though under combat conditions this nominal balance of 45 Tigers was hardly ever achieved, the new heavy battalions performing far better and drastically reduced the logistical efforts required to operate a heterogeneous mixture of tank types.

In the first months of the Tiger's operational use, very little thought was given to developing effective tactics for it, while on the other hand Tiger crew training differed little to that given to crew of German light and

medium tanks. The men of the first heavy tank Abteilungen were largely left to gather their own experiences, while higher up the chain of command, combat and experience reports were hastily gathered to speed up the development of tactics.

These experienced-based tactical directives were formulated and first put into print in the *Tiger-Fibel*, a humorous training manual, illustrated with allegorical sketches, technical drawings, photographs and cartoons in August 1943. In the light of experience, it had soon become clear that the Tiger was actually at its best in a long-range engagement or in a ambush position, picking off incoming enemy tanks further away, with its superior gun.

### TIGERS IN COMBAT

The Tiger saw its baptism of fire in September 1942 in an action south of Lake Ladoga on the northern Russian front. The outcome can only be described as a disaster. Ignoring the well-known, swampy ground conditions, all four available Tigers were sent into action. Being unable to manoeuvre properly, all four were severely



A large formation of Tiger IIs, or King Tigers, the superior successor to the Tiger I



A Tiger deployed during operations on the Eastern Front, creeping past a village in the Orel region



damaged. One of them, abandoned by its crew, could not be recovered, and later fell into Soviet hands, yet this prelude would not prevent the Tiger from proving its value on the Eastern Front.

Three months later, Tigers of s.Pz.Abt 502, again fighting at Lake Ladoga, Mishkino and Krasnyi Bor, achieved spectacular successes. Between 19 and 31 March 1943, four of the unit's Tigers (supported by three Panzer IIIs) destroyed 48 Soviet tanks without losses.

In the period between 12 January and 31 March of the same year, s.Pz.Abt 502 destroyed 160 Soviet tanks while losing only nine Tigers in the process. During this period, the unit operated in cohesion, and time was given for refit and repairs, while the German heavy tanks were not split up and were supported by a number of assault gun and tank-hunting units.

*'Tigers have to be used as battering rams in a running attack and as a bumper in the focal point of a defence. There is the danger that Tiger units receive tasks that could be fulfilled without any difficulty by regular tank companies. Constant positional changes put a massive strain on suspensions and engines while also taking up time needed for technical servicing – the damage caused by this will result in Tiger units not being available when needed'*

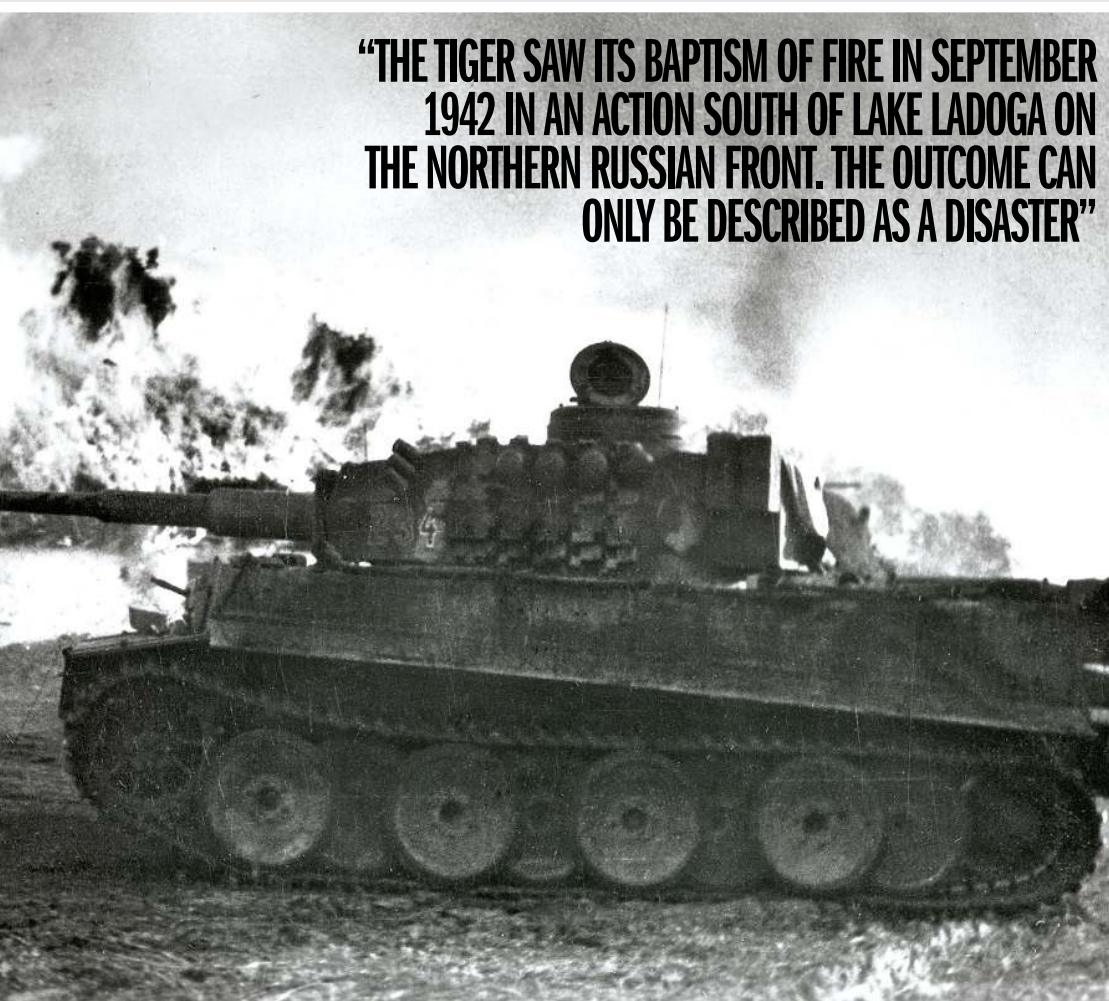
- Hauptmann Lange, CO 2./s.Pz.Abt 502, 29 January 1943

On 10 October 1943, s.Pz.Abt 503 reported the results of 78 days of continuous fighting in the area of Kursk. In total, the unit had destroyed 501 Soviet tanks, 388 anti-tank guns, 79 artillery pieces and seven aircraft. 18 Tigers had been lost in combat: six burned out after being hit by 12.2cm and 5.7cm guns, one had been taken out of action by a Soviet close-combat team using Molotov cocktails, one had been destroyed by friendly fire from a German assault gun, another had been blown up after receiving a penetrating hit in the lower hull, three had been disabled by direct artillery hits on radio operators coppola and suspension system, four had been severely damaged by penetrating hits in the suspension and tracks and had to be transported back for repair.

In stark contrast to the myth of the unreliable Tiger, only two had been lost due to technical problems – one had to be blown up after engine failure, while another was destroyed by its own crew after suffering a failure and block of the final drive system. In the whole period and under combat conditions, the unit had managed to keep an average daily combat strength of 10 to 12 Tigers available.

*"...the development of the situation in Africa requires the urgent and extra supply of modern and decisive weapons. The speedy delivery of a company of Tigers (1./s.Pz.Abt 501) has been ordered" – German High Command (OKH), Operational Section, 2. November 1942*

**"THE TIGER SAW ITS BAPTISM OF FIRE IN SEPTEMBER 1942 IN AN ACTION SOUTH OF LAKE LADOGA ON THE NORTHERN RUSSIAN FRONT. THE OUTCOME CAN ONLY BE DESCRIBED AS A DISASTER"**



# EARNING STRIPES

## THE ELITE PANZER UNITS

### WAFFEN SS



#### S.S.-PANZER-ABTEILUNG 501

Formed in July 1943 around a core of troops of SS-Panzer-Division 'Leibstandarte Adolf Hitler', the unit saw service in Italy and on the Eastern Front. Assigned to the 'Hitler Youth' Division it saw service against the Western Allies in Normandy. Refitted with King Tigers from September 1944, it fought in the Battle of the Bulge before seeing final service on the Eastern Front.

**ENEMY TANKS DESTROYED: CA 500**  
**OWN LOSSES (TOTAL): 107**  
**KILL RATIO (TOTAL LOST): 4.67**



#### S.S.-PANZER-ABTEILUNG 502

Formed in October 1943, it saw service in Normandy from June 1944, and was later sent to the Eastern Front in March 1945.

**ENEMY TANKS DESTROYED: CA 600**  
**OWN LOSSES (TOTAL): 76**  
**KILL RATIO (TOTAL LOST): 7.89**



#### S.S.-PANZER-ABTEILUNG 503

Formed in November 1943, the crew's saw combat service as infantry in Yugoslavia until January 1944 when the unit was sent to Holland. It was attached to Heeresgruppe Weichsel and sent to the Eastern front Jan 1945.

**ENEMY TANKS DESTROYED: CA 500**  
**OWN LOSSES (TOTAL): 39**  
**KILL RATIO (TOTAL LOST): 12.82**

### WEHRMACHT HEER



#### S. PANZER-ABTEILUNG 501

Formed for service in North Africa, where the first units arrived in November 1942. The unit surrendered in Tunisia in May 1943. Reformed, it was then sent to the Eastern Front in November 1943.

**ENEMY TANKS DESTROYED: CA 450**  
**OWN LOSSES (TOTAL): 120**  
**KILL RATIO (TOTAL LOST): 3.75**



#### S. PANZER-ABTEILUNG 502

Formed in August 1942, the first tanks arrived at the front near Leningrad on 29 August 1942, with more tanks arriving from February 1943. It saw combat on the Eastern Front only, and was one of the most successful Tiger units created.

**ENEMY TANKS DESTROYED: CA 1400**  
**OWN LOSSES (TOTAL): 107**  
**KILL RATIO (TOTAL LOST): 13.00**



#### S. PANZER-ABTEILUNG 503

The unit saw service on the Eastern Front in southern Russia, and took part in the withdrawal from Stalingrad. It fought at Kursk, and later near Cherkassy, before being transferred to the Western Front in April 1944.

**ENEMY TANKS DESTROYED: CA 1700**  
**OWN LOSSES (TOTAL): 252**  
**KILL RATIO (TOTAL LOST): 6.75**



# THE KING TIGER

THE TIGER TANK AND ITS VARIANTS BROUGHT FORMIDABLE FIREPOWER, INNOVATION, AND NEW TACTICS TO THE EUROPEAN THEATRE IN WWII

The Tiger II, or King Tiger, was the heaviest tank deployed by any combatant during World War II. Based upon practical experience with its predecessor, the Tiger I, the King Tiger incorporated numerous innovations that were far ahead of its time. Its primary weapon, a variant of the formidable 88mm multi-purpose gun, was capable of destroying targets at distances of up to 2.4 kilometres, while its armour protection was virtually impervious to anything but a direct hit at its weakest points.

**"ITS PRIMARY WEAPON, A VARIANT OF THE FORMIDABLE 88MM MULTIPURPOSE GUN, WAS CAPABLE OF DESTROYING TARGETS AT DISTANCES OF UP TO 2.4 KILOMETRES"**

## MAIN ARMAMENT

The 88mm KwK 43 L/71 high velocity gun was the most powerful weapon of its kind mounted in a tank during World War II. The L/71 entered production in 1943, and was introduced with the Tiger II, or King Tiger. Its barrel length of 6.43 metres was over a metre longer than the 88mm L/56 mounted on the Tiger I, and its muzzle velocity reached an astonishing 1,000 metres per second. New armour-piercing rounds, larger than those of the L/56, were also developed. An anti-tank version of the L/71, the PaK 43, was mounted on tank destroyers or field artillery carriages.

## SECONDARY ARMAMENT

A pair of MG 34 machine guns, capable of a high rate of fire compared to contemporary Allied weapons, was installed for protection against enemy infantry. One was mounted coaxially in the turret, while the other was positioned frontally in a ball mount on the right side of the hull.

## ARMOUR PROTECTION

Sloped 50mm to ward off enemy shells, the frontal armour of the Tiger II was also 150mm thick. The turret glacis was armoured with 180mm of steel, and the side armour, sloped at 25 degrees, was 80mm thick. While such protection was a strong attribute, the great weight strained performance.

## FAMILIAR INTERIOR DESIGN

The interior layout of the King Tiger borrowed significantly from the PzKpfw. V Panther medium tank design. The King Tiger accommodated a crew of five with the driver seated forward in the hull to the left and utilising a cut steering wheel, power steering, and semiautomatic gear box. Manual tillers were installed if the transmission failed. To the driver's right sat the hull machine gunner/radio operator. The large turret accommodated the massive breech of the 88mm L/71 gun, with the commander seated to the left rear, the gunner in front to the left of the breech, and the loader on the right.

## TORSION BAR SUSPENSION

The Tiger II's traverse torsion bar suspension helped minimise cross-country instability. However, the nine overlapping road wheels on either side of the hull continually required maintenance due to trapped debris. In winter conditions, the wheels would sometimes freeze together, requiring the crew to remove ice before the tank could operate.

## 88MM MAIN GUN MANTLET

## DRIVER'S PERISCOPE WITH ROTATING CAPABILITY



**COMMANDER'S CUPOLA WITH VISION SLITS****LOADER'S HATCH FOR INGRESS AND EGRESS****ANTI-PERSONNEL S MINE PROJECTOR POSITION****HENSCHEL TURRET**

The Henschel turret of the King Tiger replaced an earlier, rounded design erroneously labelled the 'Porsche turret,' which presented a possible shot trap issue for enemy rounds that struck the vulnerable area where the turret meets the tank's welded hull. The Henschel turret is distinctively flatter and features sharper angles, helping to ward off enemy rounds and diminishing the concern for shot trap damage. Only the first 50 production King Tigers were topped with the Porsche turret. The Henschel turret also eliminated a noticeable bulge on the left side that was originally meant to support the commander's cupola position.

**COMMON POWERPLANT**

The source of numerous mechanical failures, the Maybach V-12 HL 230 P30 petrol engine was the same powerplant installed in late-war Panther medium tanks. Capable of generating 690 horsepower and a top road speed of 38 kilometres per hour, the understrength engine was the Achilles heel of the Tiger II.

**REAR FUEL TANK PORT****INTERCHANGEABLE WIDE BATTLE TRACKS****AMMUNITION CAPACITY**

The Tiger II carried a mixture of up to 80 rounds of armour-piercing and high-explosive ammunition for its 88mm gun. The rounds were stored at the rear of the turret, and along the right side of the hull, offering the easiest access for the loader during combat operations.



Between November 1942 and January 1943, 29 Tigers had been landed in Africa to equip s.Pz.Abt. 501, which first saw action in the African theatre of war in December 1942.

*"Around 3pm enemy contact was made. Weak enemy infantry forces 3 km north-west of Djedeida. The company was met by heavy artillery fire from the heights north of Tebourba and repeated strafing attacks by enemy aircraft. Hauptmann von Nolde was killed by a artillery hit while trying to enter his tank. The attack was resumed against enemy tanks in the olive groves 5 km west of Djedeida. Thick growth of olive trees minimised fields of both vision and fire and enemy tanks had to be engaged at the closest distance (...)*

*General Lee tanks opened fire on the Tigers on ranges of 80 to 100 metres. Hits stuck in the armour but failed to penetrate (...) Two General Lee tanks were destroyed in a range of 150 metres. One Tiger lost through engine failure"*

In Northern Africa the Tigers were used along a vast and long frontline. This hampered their effectiveness, while their small number (often there were less than ten Tigers operational) limited their tactical value. Huge distances had to be covered – this and the heat of the North African desert caused a serious strain on the heavy German tanks and a severe drop of the operational readiness of s.Pz.Abt 501.

After the defeat at Stalingrad and the failure of Operation Citadel, the German Army had once and for all lost the initiative, and large-scale defensive operations were a thing of the past. On the Eastern Front, the overstretched

*A Tiger easily fording a small creek on the Eastern Front, in the summer, 1943*



**A Tiger stands ready in occupied Bozen, Italy, September 1943**

German defensive lines were faced with an enemy vastly superior in number of weapons and wealth of supplies and manpower.

In summer 1944, this critical situation reached its peak when the German Army Group centre collapsed during Operation Bagration. Along the Eastern Front, diminished German units were attempting to slow the Soviet advance with local counter attacks.

Yet even the German superiority in training and technology could only delay the Soviet march to victory. The appearance of new, heavy Soviet tanks with powerful guns like the JS-2 and the T-34/85 had changed the balance of power by reducing the range superiority of both the Tigers and the King Tigers tank guns and by outclassing most of the earlier and lighter German tank models

like the Panzer IV. Yet, even by the end of 1944, the nimbus of the Tiger still served as a weapon on its own right.

*- Soon after the appearance of the 'Tigers' most 'Josef Stalins' turn around and trying to avoid a gunnery battle.*

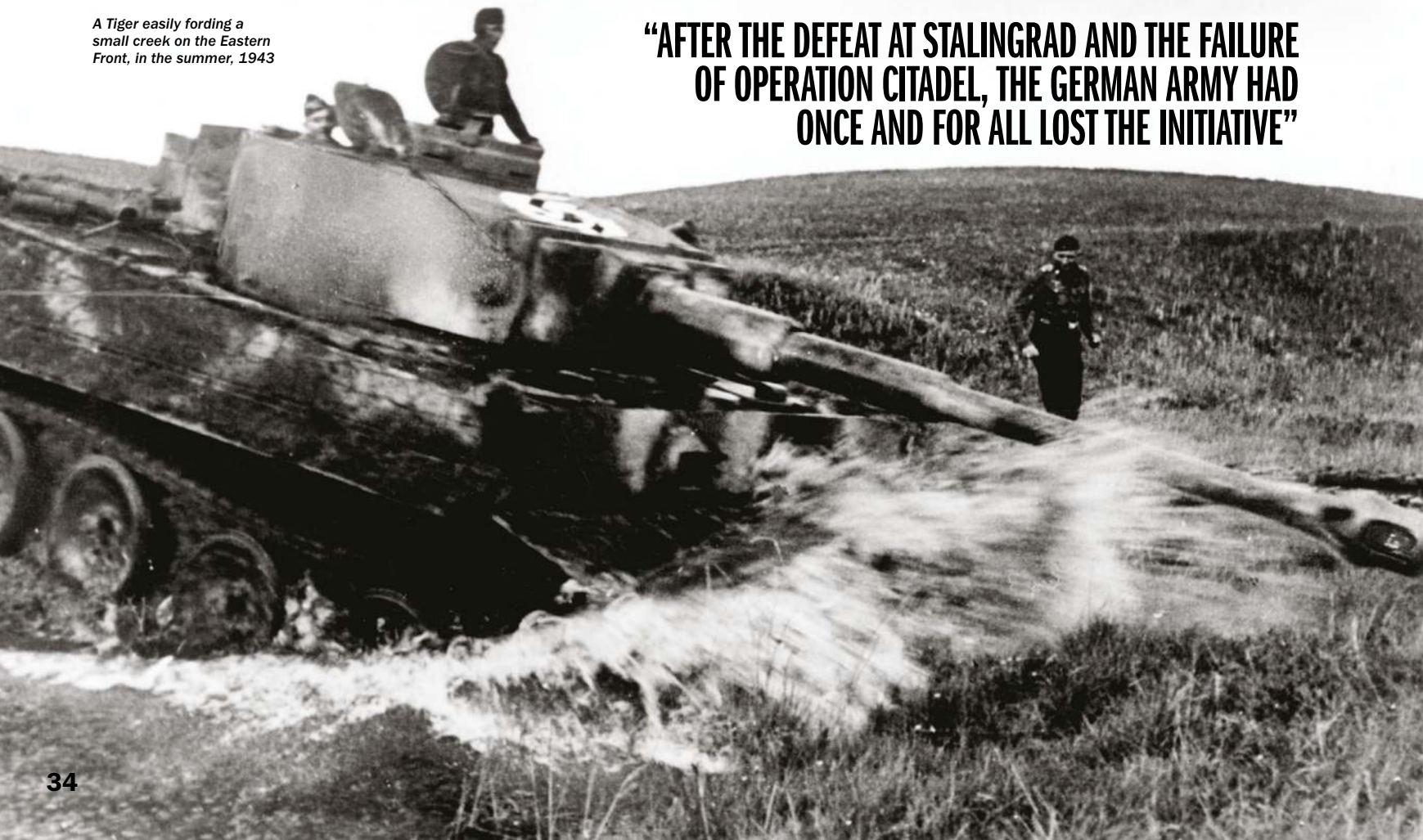
*- Usually 'Josef Stalins' only engage in a gun duel on greater ranges (over 2000 m) and only when they are in a flanking position.*

*- Often Russian crews bail out when the first shot has been fired at them.*

#### **German experience report**

It was becoming increasingly difficult for the German Army to outweigh the enemy's numerical advantages by superior tactics. The strain on men and machine was terrible, and

**"AFTER THE DEFEAT AT STALINGRAD AND THE FAILURE OF OPERATION CITADEL, THE GERMAN ARMY HAD ONCE AND FOR ALL LOST THE INITIATIVE"**





# THE TIGER'S STRIPES

THE COMPETING HENSCHEL AND PORSCHE FIRMS FOUND ADDITIONAL APPLICATIONS FOR THEIR EXPERIMENTATION THAT LED TO THE INTRODUCTION OF THE TIGER



## TIGER I NUMBERS PRODUCED: 1,350

On 20 April 1942, Adolf Hitler's birthday, Henschel and Porsche unveiled prototype designs for a new heavy tank that would eventually supplant the PzKpfw. IV, the backbone of the German panzer force.

The Henschel design was chosen and named PzKpfw. VI Ausf E, later earning the fearsome nickname Tiger I.

The new 56.9 tonne behemoth had been built with the prerequisite that its 9.9 tonne turret mount an adapted version of the 88mm multipurpose gun, a proven improvised tank killer in its field artillery/antiaircraft configuration. The Tiger I became a battlefield legend but suffered from an overly complex design.



## TIGER II NUMBERS PRODUCED: 492

By 1943, the imposing Tiger II was in development as the successor to the Tiger I. Again, Henschel won the contract with the German Armaments Ministry. At 63.5 tonnes, the Tiger II was significantly heavier, and though its armour was virtually impervious to enemy fire its ponderous weight overtaxed its inadequate 12-cylinder Maybach petrol powerplant. The Tiger II was so heavy that transport of any consequential distance required the use of railroad flatcars. Although its 88mm gun was lethal at great distances, the Tiger II was never produced in numbers significant enough to alter the outcome of World War II.



## FERDINAND (ELEFANT) NUMBERS PRODUCED: 91

When Porsche's Tiger I prototype was rejected in favour of the Henschel design in 1942, the company re-purposed those chassis manufactured as experimental tanks into heavy tank destroyers. The result was the massive Ferdinand tank destroyer, named after its designer Ferdinand Porsche. Weighing 65 tonnes and introduced in 1943, the Ferdinand mounted the 88mm KwK 43 L/71 gun and carried a crew of six, including two loaders, in an enclosed hull. Combat experience resulted in modification of 50 surviving Ferdinands in 1944. Nicknamed Elephant, these vehicles were improved with an MG 34 machine gun, anti-mine zimmerit paste, and commander's cupola.



## JAGDPANZER VI JAGDTIGER NUMBERS PRODUCED: 88

The fulfilment of an Armaments Ministry requirement that all new tank designs be accompanied by a similar tank destroyer configuration spawned the development of the Jagdpanzer VI Jagdtiger, or Hunting Tiger. The Henschel chassis was topped with a superstructure rather than a traversing turret, and the 128mm Pak 44 L/55 gun, the heaviest anti-tank weapon of World War II, was modified to fit. Both Henschel and Porsche contributed suspension systems, Henschel with nine road wheels and Porsche eight. The Jagdtiger weighed an incredible 70.6 tonnes. Like other German heavy tanks of the period, it was underpowered and mechanical breakdowns were common.



## STURMTIGER NUMBERS PRODUCED: 19

Built atop the Tiger I chassis and mounting a 380mm RW 61 rocket launcher, the Sturmtiger, or Assault Tiger, was developed in 1943 as an infantry support weapon. In theory, an urban assault vehicle had merit; however, by the time the first of only a handful of Sturmtigers was completed Germany was in retreat on two fronts. Limited ammunition capacity led to the need for an armoured ammunition carrier to accompany the Sturmtiger during deployment. Only one of these carriers was completed. In a collaborative effort, Krupp manufactured the hulls, while Henschel added the chassis, and Alkett built the superstructure.

## HUNTING WITH THE TIGER

OTTO CARIUS DESCRIBES HIS EXPERIENCES SERVING WITH THE HEAVY PANZER

"From the start we had to cope with technical problems. We first used Tigers at Lake Ladoga, near the Volkhov. The terrain was totally unsuitable for tanks, and it was a freezing cold winter. All Tigers broke down! But things like that happen with every new technology.

"Even though it drove smoothly like a car, the most significant factor in a Tiger's and King Tiger's reliability was the capability of the driver. An experienced driver could reduce technical issues to an absolute minimum. I usually had experienced drivers but later when we switched to Jagdtigers they were a catastrophe. In the hands of an experienced crew and with regular technical servicing the Tigers were just as good and reliable as any other tank.

"As a rule of thumb one ideally had to service the tank for 10 minutes for every 60 minutes of operational use. Yet, in the later stages of the war when supplies ran low and we did not have the luxuries of trained crews and personnel anymore, that became increasingly difficult and more and more Tigers were lost. Mostly not by enemy fire. We just had to leave them behind. In general the Tiger was an excellent



weapon with which you could engage enemy armour on ranges where you did not risk to be hit yourself. I have often seen T-34s destroyed on ranges over 3,000 metres. With the long 8.8 of the King Tiger and especially the 12.8cm gun of our Jagdtigers we had the absolute superiority in firepower, although the Jagdtiger was far from being a good 'tank'. We once had to fire through the walls of a well made house to score a hit on the IS-2 tank standing behind it. Went clean through. Tremendous firepower."

**"I HAVE OFTEN SEEN T-34S  
DESTROYED ON RANGES  
OVER 3,000 METRES"**

**OTTO CARIUS  
(S.PZ.ABT. 502)**

**VICTORIES: 150-200 TANKS DESTROYED**



# FACTORY FLOOR

**PRODUCTION ISSUES CONTRIBUTED TO THE LIMITED SUCCESS OF THE TIGER TANK, AS THE FORTUNES OF WAR TURNED AGAINST NAZI GERMANY**

The German penchant for over-engineering and precision craftsmanship, disruptions due to relentless Allied bombing, excessive costs that strained a wartime economy, and chronic shortages of critical raw materials conspired to limit the production and performance of the Tiger tank and its progeny during World War II.

While the Tiger earned a reputation second to none among the legendary tanks of the 20th century, fewer than 2,000 Tiger I and Tiger II tanks were completed from 1942 through 1945. In comparison, the United States produced nearly 50,000 M4 Sherman tanks and Soviet factories manufactured more than 60,000 of the superb T-34 and T-34/85 tanks. Although the Tiger may have held a decided advantage in tank versus tank combat, the sheer weight of Allied numbers prevailed. The battle of the tanks was won on the assembly line.

Despite the innovations inherent in the Tiger I and Tiger II, including the highly effective 88mm main weapon, accurate optics for superior targeting, armour and design elements that increased survivability, power steering, and a semiautomatic transmission, the Tigers were consistently underpowered. Their Maybach engines could not deliver the horsepower to allow top cross-country speeds over 20 to 25 kilometres per hour and were prone to mechanical failure. Excessive fuel consumption limited the Tiger's range as well.

The construction of a single Tiger II required a staggering 300,000 man-hours, while the cost of a Tiger I was roughly 251,000 Reichsmarks, more than double that of a PzKpfw. IV, the workhorse of Panzer formations throughout World War II. Therefore, many analysts would deem the return on the Tiger investment as well short of break even. Compounding the challenges of production and deployment was the simple fact that the Tiger and its variants emerged too late to tip the balance of combat power in favour of the Axis.

*A factory worker welds components of the overlapping wheel system utilised in the Tiger I and Tiger II heavy tanks*



*Crewmen work on the engine of a Tiger tank in the field. This sight was quite common amid mechanical failures*



due to the lack of supplies, replacements and material the casualties of the German heavy tank units began to rise.

*"Incessant action. On 26 September not a single Tiger was operational. Everyone thinks the Tiger is invulnerable! Because of that it's wrongly used: 500 metres from front, 1,500 metres from the sides. [There are] major problems when operating with infantry. These are not assault guns! Huge strain on the assistant gunners, 9 unconscious! Only 5 towing vehicles available instead of 13. Procurement of spare parts increasingly difficult. Repair shop crews have no experience. No stock of spare parts, the electrical welding kit missing"*

**- Major Lange, s.Pz.Abt 506, 15.01.1944**

Yet all those problems aside, the unit managed to destroy 213 enemy tanks, 194 anti-tank guns within a period of three months while having an average combat strength of only 14 Tigers and while losing only two Tigers in combat. By 14 January none of the Tigers in Lange's unit was still operational. The last two Tigers had covered distances of 340 kilometres before finally breaking down. In average the other Tigers had lasted 250 kilometres – while being in constant action for the whole distance, with no time for technical servicing or repairs. No Tiger had to be left behind, none had to be destroyed by its crew.

Even in the final days of the war, small units on Tigers on the Eastern Front managed again and again to turn the tide and to delay and stop advances of far superior Soviet forces. On 19 April 1945, Soviet forces were

pressing forward to force a breakthrough to the Reichshauptstadt Berlin. Operating west of the city was s.SS-Panzer-Abteilung 503 operating the enormous King Tiger, the Panzerkampfwagen Vlb. In a series of engagements that can be classed as one of the final tank battles of the World War II, the few King Tigers of s.SS-Pz.Abt 503 proved for a last time that if used correctly and operated by experienced crews, the huge war machine was still master of the battlefield. Holding the high ground in the hilly terrain northeast of the town of Klosterdorf King Tiger 314 (SS-Unterscharführer Diers) spotted 13 Soviet T-34/85 tanks approaching his position. Within 15 minutes he had destroyed all of them.

Damaged during the engagement Diers had to withdraw, but had temporarily halted the Soviet advance. About the same time near Grunow five other King Tigers of the unit met another flood of Soviet armour with a withering hail of gunfire from their long 8.8cm guns.

When ammunition supplies began to run out, a reserve of three more King Tigers (under SS-Oberscharführer Körner) were brought forward to assist the destruction work. In total they destroyed about 105 Soviet tanks. These losses alone account for 14 per cent of the overall tank losses for the 1st Belorussian Front during the Berlin Operation. One King Tiger was lost to a barrage of Soviet Katyusha rockets. Only a short time later SS-Oberscharführer Körner, in command of a platoon of three King Tigers, was in action again during a counter attack in the area of Bollersdorf where he spotted two columns of over 30 IS-2 and over 100 T-35/85 tanks assembling for an attack. In the short engagement that followed all IS-2 tanks and a number of T-34/85s were knocked out, Körner

**"WHILE TIGER UNITS IN RUSSIA TRIED TO STEM THE SOVIET ADVANCE AND REGULARLY SUCCEEDED IN DOING SO, THE SITUATION ON THE WESTERN FRONT IN ITALY AND FRANCE WAS A LOT DIFFERENT"**





alone claiming 39 of the kills while his friend and comrade Harrer claimed a further 25.

In the late afternoon, four King Tigers defeated another Soviet tank attack, destroying a further 30 T-34s before repelling an assault by swarms of Soviet infantry. During the night, with the battlefield lit up by illumination flares, the fighting continued and more Soviet tanks were picked off by the precise and powerful guns of the Tigers. From 21 April, s.SS-Pz.Abt 503s King Tiger saw action in Berlin, breaking up various Red Army assaults within the city and destroying 15 tanks on that day alone, most of them at what can be considered point-blank ranges.

While Tiger units in the east tried to stem the Soviet advance and regularly succeeded in doing so, the situation on the Western Front in Italy and France was a lot different. American and British troops were far more capable of adapting to German tactics and strategy and were able to repel every German attack by making use of their superior numbers, supplies and, most importantly, their aerial superiority.

In the west, German armour was hardly able to move in daylight without risking destruction by the ever-present Allied *Jabos* (Jagdbomber/ fighter-bomber) – the combined arms tactics developed by the Germans and so successfully used by them in 1939-41 were now being turned against them. Wherever Americans or British troops planned an attack it was prepared by intense artillery strikes and air attacks, when the Germans tried to do the same, their efforts were destroyed by the same means. In the Ardennes, the hilly terrain further exacerbated the mechanical difficulties of the King Tigers. The soft-surfaced, narrow roads were also insufficient for such large, heavy vehicles attempting to move quickly. For this



reason, both heavy tank battalions were largely ineffective during the Battle of the Bulge. Because of breakdowns, problems in supply, and the restrictive terrain, likely only a handful of Allied tanks, possibly as few as 20, were destroyed by Tiger units during the battle.

*"Of course we could take on eight or ten Sherman tanks when the situation demanded it. Yet they always had an eleventh or twelfth available. Our fighter planes were nowhere to be seen. We could only move by night. They had all the ammunition – we had none and had to choose our targets carefully. Each shot had to count. We were outnumbered, outgunned and lacked everything"*

- Hermann Wehnmann, s.Pz.Abt 503

**Above:** A knocked-out Tiger and a dead crew member on the Eastern Front. Tigers were largely successful but could not tip the balance against huge Russian numbers

Both the Tiger and the King Tiger, though expensive and time-consuming to produce, proved to be excellent tanks that could withstand many large-caliber hits while still remaining operational. The low number of Tigers destroyed by direct enemy action is proof of its resilience. It was, however, a very maintenance-intensive vehicle, often forcing German units to operate with only a fraction of the authorised vehicle strength. However, the handful of vehicles operational, especially in the defense and even late in the war, proved many times that they were capable of locally wreaking havoc on enemy armoured units.

**Tigers make their way across the scarred battlefield south of Lake Ladoga, September 1942. Difficult terrain made it incredibly difficult for the Tigers to operate effectively**







# THE TIGER COLLECTION

## THE TANKS, THE TERROR & THE TRUTH

THE TANK MUSEUM AND WORLD OF TANKS PRESENT A NEW, UNIQUE EXHIBITION THAT UNIFIES EVERY MEMBER OF THE TIGER FAMILY FOR THE FIRST TIME EVER

In a world-first, The Tiger Collection is a thrilling new exhibition where tank-lovers can explore every iteration of this iconic behemoth – including the museum's own Tiger 131 – all under one roof. Opened in the spring of 2017, the exhibition also presents first-hand veteran testimony, from men who fought both alongside and against Tiger tanks during WWII.

As one member of the Tiger family is physically absent from the exhibition (the Sturmtiger), video game developer and publisher Wargaming is stepping in with cutting-edge augmented reality technology to fill the gap. This will provide visitors with a hyper-real Sturmtiger CG model that can be manipulated and explored both in and out, all in a virtual reality setting.

Scheduled to remain open for at least two years, the collection is also set to be a firm favourite at the upcoming Tankfest 2017, presented by *World Of Tanks*. Here The Tank Museum's Roz Skellorn explains more.

### WHAT WAS THE IDEA BEHIND BRINGING TOGETHER EVERY TYPE OF TIGER IN THE ONE EXHIBITION?

The Tigers are a particularly popular family of tanks and with WWII veterans starting to leave us, we decided that the time to do a really popular WWII exhibition was now. We know that people absolutely love the Tigers and we've been drawing people in from all

over the world to see this exhibition. It's the first time it's ever been done and having them side by side you can see that they are a family. You can see the different developments that happened and how they're related.

Unfortunately we couldn't get the sixth member of the family, which was the Sturmtiger. *World Of Tanks* is actually using pioneering technology and [the developers] are building us a Sturmtiger in augmented reality to replace the fact that it's not here. When it's up and working, hopefully in time for Tankfest, people will be able to use a device to see the Sturmtiger as if it's actually there. They can move around it and see inside it, it's going to be absolutely incredible. It's a shame we couldn't get all of the actual tanks but it's nice to have the virtual augmented one in place of it.

We've also done a lot of WWII veteran interviews for this. We've had interviews with German and British veterans and the basic idea is to see what their experiences with the Tigers were. Ultimately, we thought that if we could do this exhibition we could bring people to the subject and it's something that they are going to want to see.

### CAN YOU DESCRIBE THE DIFFERENT ASPECTS OF THE EXHIBITION?

We've decided to do it quite sparse to give visitors the full impact of these massive machines and how intimidating they look. They are absolutely huge; especially the 'King' Tigers and you can understand why British crews would be terrified in their relatively small Shermans. Coming up against these massive beasts would have been terrifying but the psychological fear was far more real than reality. We've also got a few artefacts in a case at the end of the exhibition that relate to the Tiger, such as parts of engines and equipment.

The main thing aside from the vehicles is the veteran interviews. You can hear from British veterans, one of whom is sadly no longer with us, as well as German veterans. For me, listening to the Germans is fascinating because you usually never hear from them so to hear their perspective about what it was actually like to fight in a Tiger is quite unique.

We also have a number of screens around where you can explore the tanks in far more detail. There's archive footage, images and other things that relate to the battlefield

**"I THINK THE TIGERS OFTEN GET A MYTHICAL STATUS BECAUSE THEY ARE SUCH LOVELY MACHINES AND WELL MADE AND IT'S FORGOTTEN THAT PEOPLE ACTUALLY WENT TO WAR IN THEM"**

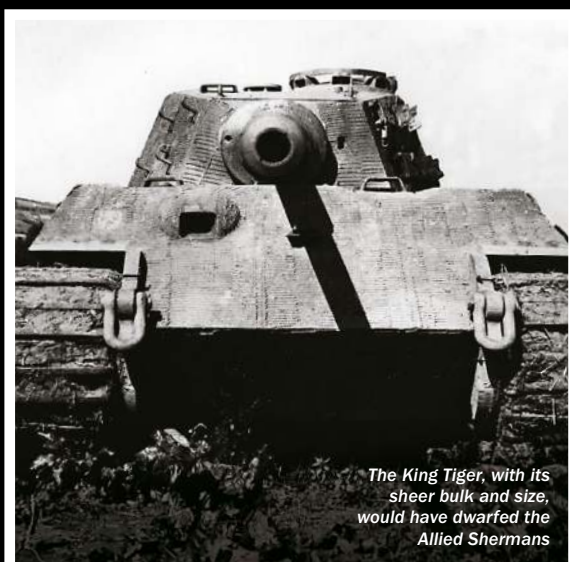
The new exhibition enables visitors to see these iconic war machines up-close





**"LISTENING TO THE GERMANS IS FASCINATING BECAUSE YOU USUALLY NEVER HEAR FROM THEM SO TO HEAR THEIR PERSPECTIVE ABOUT WHAT IT WAS ACTUALLY LIKE TO FIGHT IN A TIGER IS QUITE UNIQUE"**

*As well as the tanks, the exhibition includes testimony from British and German veterans*



*The King Tiger, with its sheer bulk and size, would have dwarfed the Allied Shermans*

history of the tanks. Nevertheless, having lined up the Tigers next to each other in this sparse environment really demonstrates their full impact.

#### **HOW IMPORTANT WAS IT TO GET HOLD OF VETERANS' AUDIO TESTIMONIES TO USE IN THE EXHIBITION?**

We're making a concerted effort to get all of the WWII veterans that we can possibly find and get them recorded. They're the people who were there and the ones who know what they are talking about. They give the real impact for visitors to hear what it was really like and what the realities of war are. I think the Tigers often get a mythical status because they are such lovely machines and well made and it's forgotten that people actually went to war in them. The veterans give you that reality check and hearing from both sides of the divide really was fascinating.

#### **IN YOUR OPINION, WHAT IS THE MOST SIGNIFICANT TIGER ON DISPLAY AND FOR WHAT REASON?**

For the museum it's definitely Tiger 131, which is the only running Tiger 1 in the world. It was captured in Tunisia in 1943 and visited by Winston Churchill and King George VI. The idea of capturing a Tiger was a really big deal for the Allies, they knew this thing was out there and they wanted to get their hands on it. The Germans went to all sorts of lengths to make sure the Allies didn't capture one so if the crews ever had to abandon their tank they were instructed to blow it up. We're not really sure why but for whatever reason Tiger 131 was not blown up so it's as original as it can be. We've spent an awful lot of time and money restoring it to running order and people come from all over the world to see it. We have our own 'Tiger Day' and it's a really special piece in our collection because it's completely unique.



*The exhibition runs for at least two years, giving you plenty of opportunity to visit*



*The stark backdrop ensures no distractions from the tanks*

**WORLD OF TANKS**

Mass multi-player online game *World Of Tanks* is the main sponsor of The Tank Collection, unifying the Tiger family for the first time ever. Visit [worldoftanks.com](http://worldoftanks.com) for more information.

## **THE TANK MUSEUM**

Museum opening times are 10am to 5pm daily, for more information visit [www.tankmuseum.org](http://www.tankmuseum.org)



# DISCOUNTED FORCES WAR RECORDS MEMBERSHIP

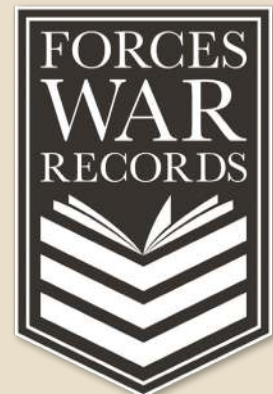
when you subscribe to History of War\*



We've teamed up with Forces War Records to offer a discounted membership with every subscription. Specialising only in military history, the genealogy site contains over 10 million records of individuals who have served from medieval times - right through to the present day.

[www.forces-war-records.co.uk](http://www.forces-war-records.co.uk)

- ★ Save 30% on a subscription to History of War
- ★ Save 40% on a Forces War Records membership
- ★ Records from the British Army, Navy, Royal Air Force, Royal Marines, Territorials – and even the Merchant Navy
- ★ Perfect for those researching their family's military history



## Never miss an issue

13 issues a year, and you'll be sure to get every single one



## Delivered to your home

Free delivery of every issue, direct to your doorstep



## Get the biggest savings

Get your favourite magazine for less by ordering direct



## Pick the subscription that's right for you



### Subscribe and save 30%

- ✓ Automatic renewal – never miss an issue
- ✓ Pay by Direct Debit

Recurring payment of £21 every six issues, saving 30% on the retail price



Instruction to your Bank  
or Building Society to pay  
by Direct Debit

Originator's reference  
5 0 1 8 8 4

Name of bank

Address of bank



Account Name

Postcode

Sort Code

Account no



Please pay Imagine Publishing Limited Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit guarantee. I understand that this instruction will remain with Imagine Publishing Limited and, if so, details will be passed on electronically to my Bank/Building Society. Banks & Building Societies may not accept Direct Debit instructions for some types of account

Signature

Date




### One year subscription

- ✓ Great offers, available world-wide
- ✓ One payment, by card or cheque

A simple one-off payment ensures you never miss an issue for one full year. That's 13 issues, direct to your doorstep

☐ UK £52 (saving 20% on the retail price)

☐ Europe £70 ☐ USA £80 ☐ Rest of the world £80

### Pay by card or cheque

Pay by Credit or Debit card

☐ VISA Visa ☐ MasterCard Mastercard ☐ AMERICAN EXPRESS Amex

Card number

Expiry date

Pay by Cheque

I enclose a cheque for

£

Made payable to  
Imagine Publishing

Signature

Date



### Your information

Name

Telephone number

Mobile number

Email address

Address




Postcode

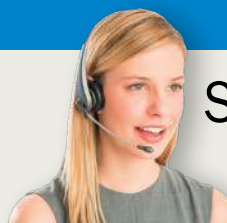
Please post this form to  
History of War Subscriptions, 800 Guillat Avenue, Kent Science Park,  
Sittingbourne, Kent ME9 8GU

Please tick if you do not wish to receive any promotional material from Imagine Publishing Ltd  
☐ By post ☐ By telephone ☐ By email

Please tick if you do not wish to receive any promotional material from other companies ☐ By post ☐ By telephone  
☐ Please tick if you DO wish to receive such information by email

Order securely online [www.imaginesubs.co.uk/war](http://www.imaginesubs.co.uk/war)

Enter the promo code **PS17G2** to get these great offers



Speak to one of our friendly  
customer service team  
Call **0844 245 6931**



These offers will expire on  
31 July 2017

Please quote code **PS17G2**

Calls cost 7p per minute plus your telephone company's access charge

\*This offer entitles all new subscribers to a 40% discount on a Forces War Records membership, standard membership prices are £8.95 for a monthly membership, or £48.95 for the whole year. Please include a valid email address when subscribing as your 40% discount code and 3 free PDF tutorials will be emailed to you within 2 weeks of the closing date. Offer code PS17G2 must be quoted to receive this special subscription offer. Imagine Publishing reserve the right to withdraw this offer at any time. Subscriptions will start with the next available issue. Details of the Direct Debit guarantee are available on request. This offer expires 31 July 2017



**"HAWKWOOD ENTERED THIS WORLD AND BECAME THE MOST FAMOUS MERCENARY OF HIS TIME, REMAINING AT THE FOREFRONT OF THE BLOODY BUT LUCRATIVE TRADE FOR 30 YEARS"**

## FACE TO THE NAME

There are several descriptions of Hawkwood's appearance although none are contemporary. The details sources give may not be reliable – one states he had straight chestnut hair, another that it was frizzy and curly. We also get details that he was heavy set, 'a young ox in the shoulders', had large, calculating brown eyes and heavy brows, and a long, irregular, pointy nose. Another states that he had thin and nervous lips. We do, however, have the fresco by Paolo Uccello in the cathedral in Florence, which is probably the closest we can come to an accurate portrait. Uccello probably used an earlier portrait, which may have dated to Hawkwood's lifetime.



Illustration: Jean-Michel Girard, The Art Agency





# JOHN HAWKWOOD

## MERCENARY MENACE

The greatest mercenary commander of the 14th century was an inspiration for historians, poets, novelists and playwrights

WORDS MURRAY DAHM

**E**urope in the 14th century was a place of incessant warfare. The Hundred Years' War began between France and England in 1337 and would last until the middle of the next century. Other conflicts engulfed various parts of the continent as well, especially in Italy where Sir John Hawkwood would make and maintain his name. It was a time when mercenaries could make both a living and a reputation for themselves by plying their craft on foreign fields. Hawkwood entered this world and became the most famous mercenary of his time, remaining at the forefront of the bloody but lucrative trade for 30 years.

### Origins

Various origins for Hawkwood have been proposed; from peasant to tanner to wealthy landowners. This latter option seems to be the most likely, but the least romantic version. Hawkwood's meteoric rise to fame, a place where he would remain for decades, meant that various accounts of his life have taken on a romanticised, almost fantastic quality.

We have no exact date for his birth in Essex but it is usually placed around 1320 since he died in 1394. The earlier birth date allows for arguments regarding his early entry into the mercenary world. He is described as an 'old fox' in 1363, which might be admissible for a

man in his forties (life expectancy was generally mid- to late-thirties).

After his elder brother inherited the family estate, John needed to find a livelihood. He had left home by 1341, the year after his father's death and there is firm evidence that he was in London as a tailor although some historians reject this idea. In Italy he was known as Giovanni Acuto ('acuto' meaning cunning or clever) and this led to the translation 'John Sharp', which some argue is related to the tailor story. There certainly were other tailors who became mercenaries. Soon after his arrival in London, however, Hawkwood abandoned his trade and joined the throngs of soldiers departing for King Edward III's wars in France.

The idea that he was such a prominent and accomplished mercenary captain has led to ideas that he took up his vocation at the earliest possible moment. It is possible that Hawkwood joined a later expedition and the following years would offer ample opportunities to become a mercenary.

### From ranks to free companies

One tradition is that Hawkwood joined King Edward's army as a longbowman. This association places him at the crux of the most important military revolution of the period. Edward's use of divisions consisting of longbowmen mixed with men-at-arms

was the cause of his success. There is no direct evidence of Hawkwood's serving as a longbowman, however, and nothing in the family history indicates that he would have been trained in its use. He also showed no favouritism for the longbow later in his career.

Placing Hawkwood in Edward's army in the 1340s allows for him to serve at the most important battles of the day – Crécy in 1346 and Poitiers in 1356 – and therefore 'learn his craft'. Some place him in the vanguard at both battles, but we simply cannot know if Hawkwood was in the army of Edward at Crécy and/or Poitiers. It is possible and may even be considered probable, but the certainty with which some authors write of his presence is unwarranted. Some authors claim that Hawkwood was knighted by the English commander Edward, Prince of Wales, at Poitiers. We know Sir John Hawkwood was knighted but when and by whom are unknown and his name is not listed in the honours bestowed after Poitiers.

One piece of concrete evidence for the career of Hawkwood came in 1359 when groups of unemployed soldiers became mercenaries. In May 1360, the treaty of Bretigny was signed, which brought an end to hostilities between England and France. It also meant that mercenary bands were forced to join together into what became known as the free



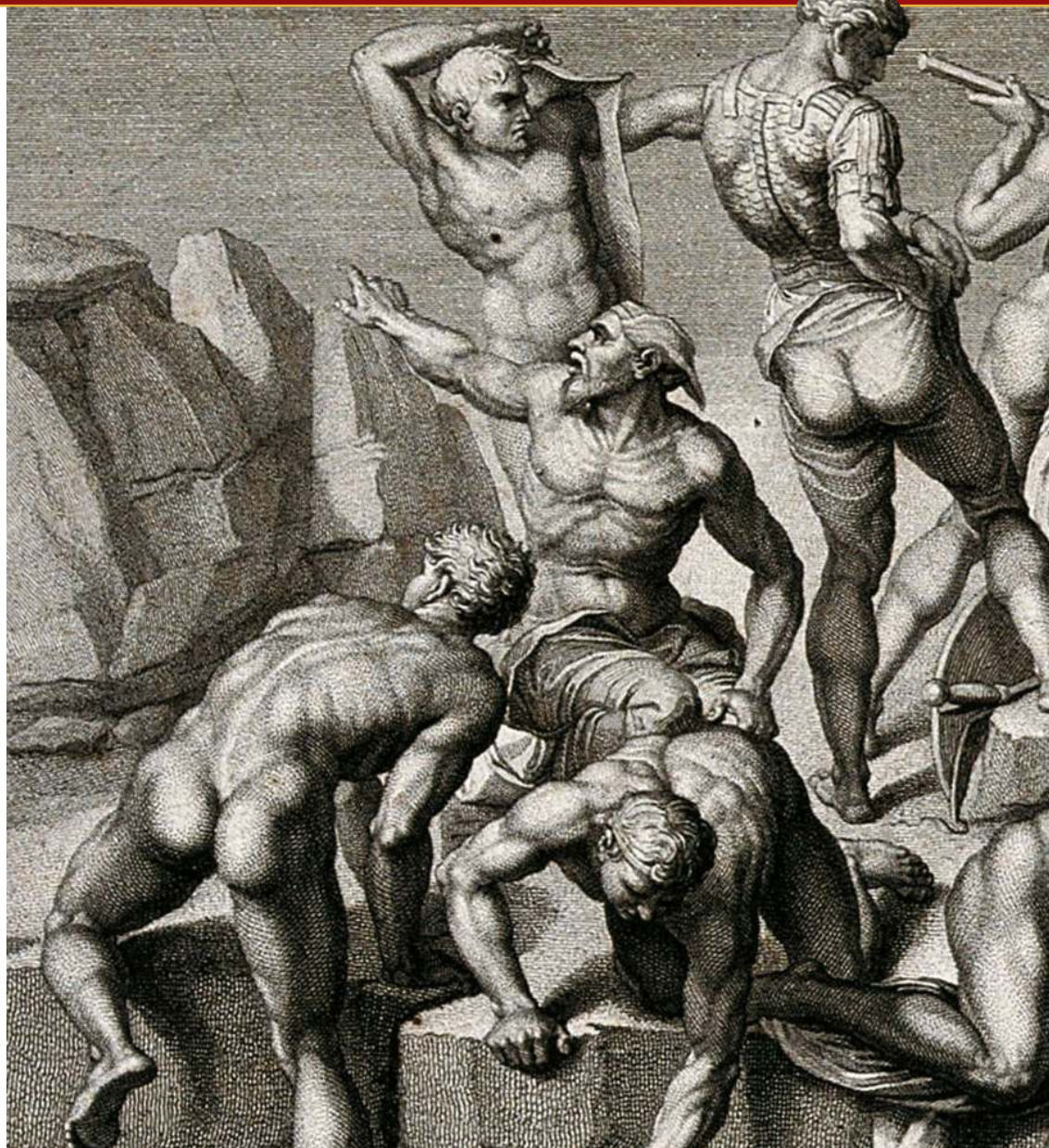
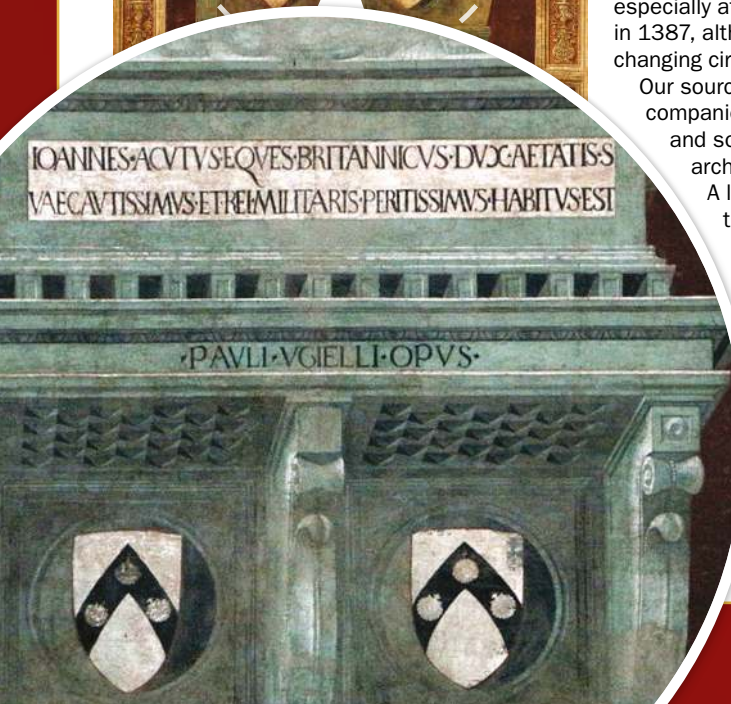
## JOHN HAWKWOOD: MERCENARY MENACE

companies. The largest of these was the Great Company and this was the group Hawkwood joined. It ravaged parts of France and was excommunicated in 1361. Peace was then made and the company was engaged to serve the Pope's interests in Italy against Milan.

Hawkwood served as a corporal in the company under the German captain Albert Strez. This group, consisting of mainly English mercenaries, became known as the White Company and became the most famous of all mercenary outfits. Hawkwood would spend the rest of his military career (and indeed his life) as a mercenary in Italy.

The Italian chroniclers dwell on the fighting style of the White Company in great detail. The soldiers would dismount and fight on foot with their lances in open battle. Behind them came the longbowmen. Knights dismounting to fight on foot was peculiar to the English, as other

**Below:** John Hawkwood Funerary monument – A fresco by Paolo Uccello, Florence Basilica di Santa Maria del Fiore, 1436. Hawkwood is portrayed as a servant of Florence. He is not in full armour (although an earlier draft shows him depicted in it) and his pose is not warlike, although again the earlier drafts showed him in an aggressive stance



mercenary bands preferred cavalry charges or even used (Hungarian) mounted archers. This method became known as the lance unit and, following the victories of English mercenaries, was adopted by cities across Italy as they witnessed its successes. Hawkwood would retain the tradition of dismounting to fight, especially at his greatest victory at Castagnaro in 1387, although he was always adaptable to changing circumstances.

Our sources usually number mercenary companies by numbers of lances or horses and sometimes include the numbers of archers, crossbowmen and infantry.

A lance was a unit of three men and three horses. A company would be led by a captain, elected by its members, although there are many instances of co-captained companies where smaller

groups joined together. Under each captain would be corporals who usually commanded between 163 and 169 horses.

Whenever a new contract was negotiated with a mercenary company it was for a number of lances and other troops for a given set of months. The cost of hiring a force would be negotiated anew each time and could vary wildly. Problems with mercenaries changing sides or abandoning a contract (in mid-battle in some cases) often occurred due to the late payment of agreed salaries or tensions over the renegotiation of a contract. Occasionally they were bribed by the enemy. The numbers of troops in these renegotiations varied from contract to contract. The smallest Hawkwood had was 13 lances but under various contracts he commanded forces of less than 100, a few hundred, all the way to several thousand.

The complex and convoluted politics of 14th century Italy gave Hawkwood and many other mercenaries ample opportunity to ply their trade. States large and small hired mercenary armies and these fought one another over lands and other disagreements. Unfortunately, mercenaries could at any time choose to abandon a contract and plunder and ravage territory (even that of their employers) for

**Left:** Detail of Hawkwood's funerary monument with the inscription: "John Hawkwood (actually his Italian name 'Acuto,' meaning sharp), British knight, most prudent leader of his age and most expert in the art of war." These words are taken from Petrarch's eulogy of Fabius Maximus



*This extravagant and fantastical 19th century engraving by Luigi Schiavonetti depicts the Battle of Cascina*



personal gain, or to extort vast sums from cities to leave their territory alone.

### **From captain to commander**

In 1363 Hawkwood would have been approximately forty and from this time he attracts the attention of chroniclers. The city of Pisa hired the White Company for the (exorbitant) fee of 10,000 florins a month and then elected Hawkwood as 'captain of war', their overall commander. We have no concrete evidence of him doing anything of note up to that point but he must have performed some deed or been able to persuade the Pisans of his qualities. We are told that he was 'a great master of war,' of non-noble family, and an 'old fox.' The epithet 'acuto' is applied to him to imply that he was as clever as a fox, as were the Pisans for hiring him.

Hawkwood's first order of business was to assure the loyalty of his corporals and troops. He launched his first attack as captain in mid-winter, planning to seize several Florentine towns in February 1364. The weather, however, was atrocious and he was forced to retreat. On 1 May, Hawkwood's forces attacked Florence and reached the city walls. The following day the Pisan army crossed the Arno River and

## **"THE COMPLEX AND CONVOLUTED POLITICS OF 14TH CENTURY ITALY GAVE HAWKWOOD AND MANY OTHER MERCENARIES AMPLE OPPORTUNITY TO PLY THEIR TRADE"**

seemed on the point of victory when it suddenly gave up. The unit commanders had been bribed by Florentine gold. The only commander to remain loyal was Hawkwood. This fact was made much of by later chroniclers of his career. The circumstances under which he became commander, however, may have led to the desertions, especially if he was never elected captain by members of the White Company.

In July 1364, the Florentine army moved against Pisa and Hawkwood came out to meet them at Cascina, six miles from the city. Hawkwood made several feints (a tactic he would use to great effect later in his career) and made sure that dust would blow into the

enemy's faces and that the Sun was behind his own forces. These tactics echo Crécy. Even though his numbers of English were depleted he had his cavalry dismount and advance on foot. Despite these tactics, Hawkwood's army was enveloped and routed. This was not an auspicious start to his career as a commander.

### **A reputation is made**

Hawkwood continued to ply his trade in the employ of various cities and his reputation steadily grew. English mercenaries would flock to him throughout his career. In 1365 his forces swelled to 7,000 horses under 43 corporals and they declared themselves the Company of Saint George. They plundered Sienese and Genoan territory but were bribed by Florence (one of the richest cities in Italy) to avoid their territory. This is a pattern of mercenary activity – a company would arrive in an area and extort bribes to leave that territory alone. If the bribe was not paid (or if an instalment was late in coming) then they would plunder the locality before moving on. We have several letters from Hawkwood extorting huge sums from various cities, usually on the understanding that he would leave their territory alone for a set time. All of this meant that having such vast numbers of mercenaries present in



Italy was a particularly dangerous double-edged sword. They were necessary for defence and offence, but there was a risk they might cause more damage to their employers.

In March 1367, Hawkwood shattered a Sienese army at Montalcinello and then moved on Perugia and defeated their army at Ponte di San Giovanni in a similar fashion before the month of March was over. The battle was described as one of the bloodiest in 14th century Italy, with up to 1,800 enemy killed.

Battles, even major ones, usually resulted in casualties numbering only in the hundreds. These numbers may strike us as relatively small but it serves as a reminder that many of these Italian states were small themselves and the expense of war meant that fielding large numbers was beyond most states. Ransom for prisoners was the usual way to generate yet more wealth for mercenary armies and their employers. The sum required by Perugia to ransom its men was so great that it had to borrow the money from Florence and Venice.

In 1368, Hawkwood signed a contract with Milan to oppose the forces of Pope Urban V. He met the Florentine army in late November 1369 at Cascina, the site of his defeat in 1364, but this time he triumphed. Hawkwood dismounted his cavalry and retreated in the face of the enemy, laying ambushes as he did so. The Florentines pursued on horseback and floundered in the muddy banks of the Arno River. In 1372, he won at Rubiera with a small cavalry force, outflanking and surrounding his enemy. By now Hawkwood was the most famous English captain in Italy and it was to him that new recruits came.

In April 1377, Hawkwood entered into a contract with Florence. He served in various campaigns and in 1380 became their captain of war. Florence kept Hawkwood on their

## **"THE BATTLE WAS DESCRIBED AS ONE OF THE BLOODIEST IN 14TH CENTURY ITALY WITH UP TO 1,800 ENEMY KILLED"**

payroll, renewing his contract promptly when each previous contract came due. They were also the only state who consistently paid Hawkwood generously and on time. His ties to Florence were strengthened in 1382 and 1383 when he was allowed to purchase property in the city and its surrounds. Hawkwood also took possession of the castle of Montecchio, south of Arezzo. A strategic strongpoint, the castle and town was located at an elevation of 364 metres and looked out on to Sienese, Aretine, Perugian and papal lands. It also overlooked a road busy with merchants and armies moving south. Hawkwood seems to have obtained this and other strategic towns in lieu of cash bribes.

In 1386, war broke out between Padua and Verona in northern Italy. In June, Padua turned to Hawkwood (described by the *Paduan Chronicle* as "the most famous and accomplished captain that there was in all of Italy"). Released from Florentine service briefly, Hawkwood rode to join the Paduan army, which was already in Veronese territory. He was given command of the army based on his reputation alone and he took it up to the walls of Verona before running out of supplies. Hawkwood then led the retreat and the Veronese army attempted to cut him off. He kept ahead of the pursuers and at Castagnaro he halted and turned to face his pursuers.

The position was a strong one since one flank was protected by the River Adige, the

other by marshland and, to their front, the Paduans were protected from cavalry charge by an irrigation ditch. In the event both sides would dismount to fight. Hawkwood could not prevent desertions from his starving forces and he was outnumbered by the Veronese.

The numbers given in the *Paduan Chronicle* (9,000 horse and 2,600 crossbows and pikemen versus 7,000 horse and 1,600 infantry and archers) may not be accurate but have been repeated often. We are also given more detail of the formations of this battle than for any other in Hawkwood's career.

He arranged the Paduans in three lines consisting of eight divisions. Hawkwood also filled and smoothed a passage over the irrigation ditch where it met the river (he clearly had a manoeuvre in mind). The Veronese came on in six divisions and included three gun-carts that were drawn by four horses each and contained 144 guns mounted on them (in the event these ahead-of-their-time contraptions would not come into play).

The Paduans began attacking the Veronese lines late in the day, either with light infantry feints or longbows (the chronicles differ). These, however, made the Veronese press forward and the dismounted lances and infantry of both sides met over the irrigation ditch. Hawkwood removed himself from the main press of the battle and led his men to the right of the field where they crossed the ditch in the place prepared earlier, falling on the exposed enemy left flank. This stratagem caused the disordering and collapse of the Veronese army. The command and many soldiers were captured (estimates range from 2,000 to 4,600). The Paduans lost 716 men and the Veronese 846 according to the *Paduan Chronicle*.

Another possible stratagem undertaken by Hawkwood was that he tossed his baton



# THE BATTLE OF BRIGNAIS

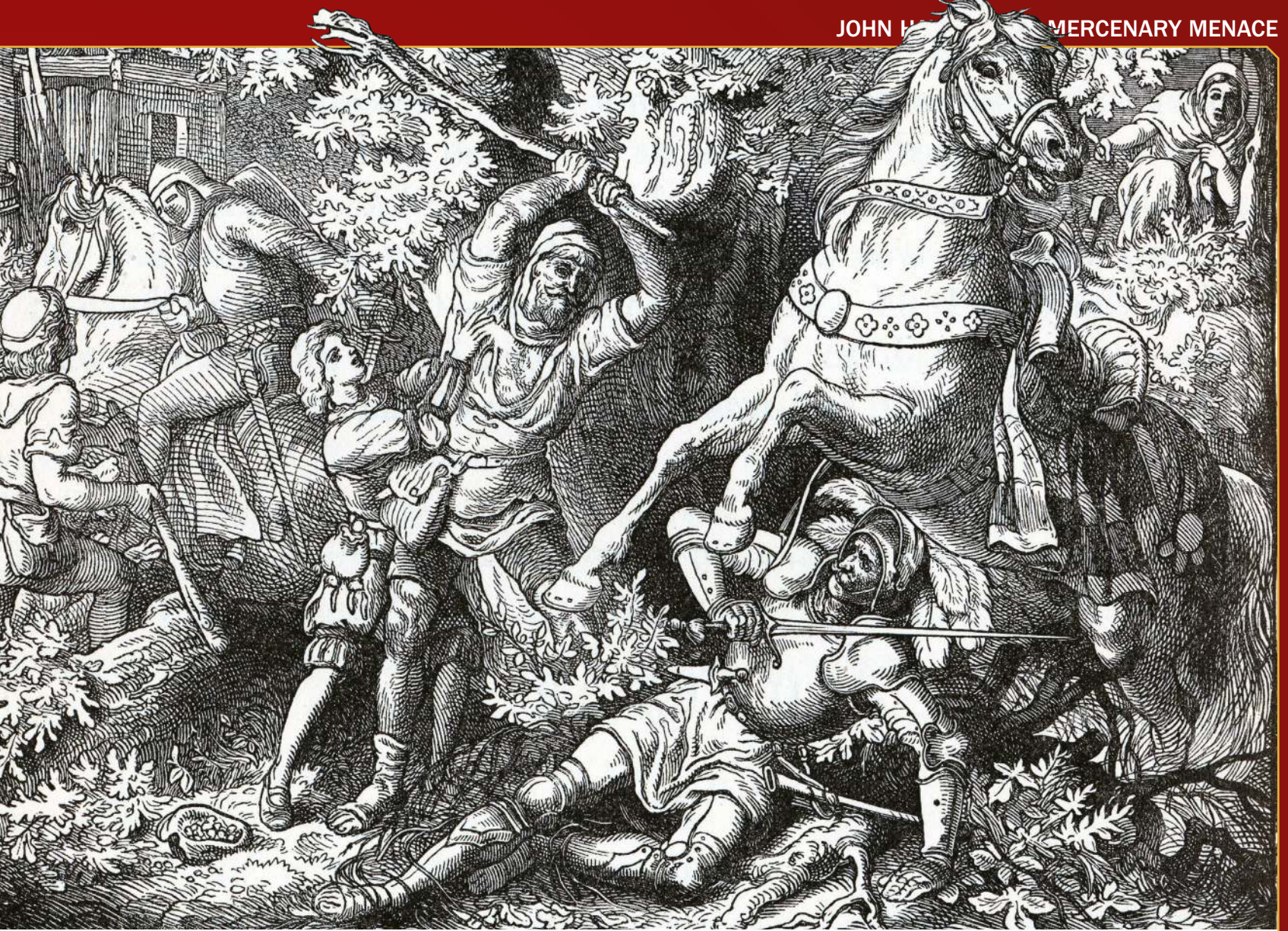
**BRIGNAIS WAS A CRUSHING DEFEAT FOR THE FRENCH, BUT WAS JOHN HAWKWOOD EVEN THERE TO WITNESS THE VICTORY?**

Several accounts of Hawkwood's life would have him leave his mercenary service and travel to France so that he could be present at the battle of Brignais, near Lyon, in April 1362. The appeal of this story, which is reproduced in nearly all Hawkwood biographies, is to have him present at another important battle and the most important mercenary victory in the period. Brignais was a victory for the Free Companies against the Kingdom of France. It is highly unlikely Hawkwood was present but as his fame grew so, seemingly, did the need to have him present at every important engagement of his lifetime.

## **"BRIGNAIS WAS A VICTORY FOR THE FREE COMPANIES AGAINST THE KINGDOM OF FRANCE"**

**Left: The Battle of Brignais, 6 April 1362, is another battle at which Hawkwood is argued to have been present, especially since it was a victory for the free companies and marked their high-water mark**





of command into the enemy ranks and then led his men on a charge to retrieve it. Some reconstructions of Castagnaro differ, stating that it was a cavalry charge to the enemy's flank and that the battle also involved false banners, even concealed forces. Castagnaro in many ways elevated Hawkwood's reputation to new and greater heights throughout the Italian peninsula, as the battle and its outcome became legendary.

Despite the fact that he was approaching 70, Hawkwood remained steadily employed. When a pan-Italian war broke out between Florence and Milan (which involved virtually all of northern Italy), Florence could call upon him to lead its forces once again. His arrival on a battlefield could send enemies into retreat. Florence wanted to mount an attack on Milan itself and in May 1391 Hawkwood advanced on Cremona, crossing the Oglio river and reaching the banks of the Adda River in June, much to the consternation of the Milanese; he was less than 20 kilometres from the city itself.

Help from the Count of Armagnac, who had invaded Milanese territory from the north, did not come as quickly as hoped and Hawkwood's force was running low on supplies. The Milanese had burned anything of use. Hawkwood had no option but to retreat, and he had to do so over three swollen rivers. The Milanese also flooded several plains to make Hawkwood's withdrawal even more difficult.

Hawkwood's withdrawal from the Adda was a masterpiece. He kept the enemy guessing at his intentions, offering battle and making quick manoeuvres to keep them off balance. Then, when the enemy seemed sure that a battle would be offered, Hawkwood withdrew his force at night, leaving banners tied to trees and bonfires lit. He also managed to keep

*Above: Anonymous depiction of a free company mercenary defeated in combat*

his army silent: no mean feat. The Milanese discovered Hawkwood's empty camp in the morning but were not prepared for pursuit. This stratagem recalled famous Roman examples by Fabius Maximus and other ancient generals. Hawkwood caused more consternation by leaving small ambushes in his wake to disrupt the Milanese pursuit. He crossed the Oglio without interference. Even though he still had to cross two more rivers, he did so with his force intact and his preservation of the army was greeted as nothing short of miraculous. Hawkwood's wisdom and cunning were praised anew. The war continued but both sides were exhausted by the expense and a peace was reached in January 1392.

Hawkwood was welcomed to Florence as a hero. He was worn out, however, and moved quickly to settle his affairs in Italy, liquidating his assets, arranging marriages for his daughters and planning to retire to England, which he had not seen in 50 years. His health, so robust for so long, seems to have finally given out and there are signs he knew his death was imminent. Before he could depart for England, Hawkwood died in March 1394. His funeral was grand and he was honoured at huge expense. The city would not forget its debt to the greatest English mercenary of the age.



*Portrait (based on funerary monument) showing Hawkwood in partial armour and holding the baton of command, which all captains would be issued*



INTERVIEW WITH DAVID TEACHER MBE

# D-DAY BASTOGNE AND BEYOND

WORDS TOM GARNER

One of the first men to land at Juno Beach, Teacher fought during the Battle of the Bulge and led the RAF vanguard into Germany

*Right: David Teacher at the very spot where he landed at Juno Beach 72 years before, 6 June 2016*





**6** June 1944. Nearly 7,000 vessels containing 132,000 ground troops cross the English Channel to take part in the Allied invasion of western Europe: the largest naval, air and land operation in history. Nothing less than the liberation of a brutally suppressed continent is at stake and after years of intense planning, failure is not an option.

Five assault beaches on the Normandy coast must be taken, including one primarily reserved for Canadian forces: Juno Beach. However, in the vanguard of this sector is a 20-year-old British member of the RAF Beach Squadrons. Sitting in the cab of his truck and laden with supplies, the young driver is launched from his landing craft into deep water. The water rises almost to his chest but after putting his foot down on the accelerator, the engine roars into action and the vehicle lurches onto the beach.

Leading Aircraftman David Teacher was one of the first men to land on Juno Beach on D-Day and spent months afterwards in the same

location ensuring that the logistical support for the Allies in France remained strong. His war continued to be dramatic beyond Normandy and as the march east continued, Teacher found himself fighting among American troops at Bastogne during the Battle of the Bulge before taking part in the invasion of Germany in 1945. Now aged 93 and still active in volunteer work, Teacher's story is a poignant tale of a young man's journey through war-torn Europe and the courage and horror that he witnessed.

### Playing 'soldiers' in Palestine

Born into a Jewish family on 29 December 1923 in Hastings, Teacher moved to what was then the British Mandate of Palestine to live with his grandparents in 1934. Living in the small community of Karkur, Teacher experienced a multicultural environment that was nevertheless characterised by tensions the British authorities spent much time attempting to resolve. It was in Karkur that Teacher first encountered British armed forces: "Due to the circumstances in

**"THERE WERE THOUSANDS OF SHIPS AND LANDING CRAFT, BATTLESHIPS, DESTROYERS, AIRCRAFT FLYING OVERHEAD... THE NOISE WAS UNBELIEVABLE. WHEN THE NAVY STARTED BOMBARDING... IT WAS HORRENDOUS"**

*Canadian and British troops landing at Juno Beach, 6 June 1944. Teacher remembers the landings as well organised and thought highly of the Canadians*





Palestine, as it was then, there were often riots between the Jewish people and the Arab people and the British police were very much involved. They had a station just outside Karkur where I was living, and eventually the Royal Ulster Rifles had a presence there and were given quite a large camp."

Far from viewing them as an occupying force, Teacher keenly interacted with the army: "I was there nearly every day of the week, going out on patrols and drinking beer with them. I learned to drive and learned to swear with them! I was 10 years of age and really had a ball enjoying myself. I also used to translate Hebrew and Arabic for them. I got into quite a lot of trouble with my grandparents."

Teacher moved back to England in 1938 and by the time war broke out in September 1939, he was living in Manchester and working as a mechanic. Having lived through the Manchester Blitz of 1940, Teacher was determined to join the war effort and signed on as an air cadet in order to later join the Royal Air Force. However, he recalls that his reasons for joining the RAF were unclear: "I don't really know why. I never wanted to fly but it was possibly the uniform. I didn't fancy the army that was for sure and the navy was impossible to join or very difficult. So I was left with the air force and I was pleased I did, I had a wonderful time."

### Training, the king and 'Monty'

Having been officially called up to serve in the British armed forces in September 1942, Teacher was assigned to the RAF and trained as a motor mechanic. By 1943 he was serving in Devon as part of Coastal Command but then volunteered to join a new outfit called Combined Operations. These units were specifically formed as part of the plans for the Allied invasion of Europe. As Teacher describes: "It was a way of getting the sea services to work together, instead of working against one another, or not being available when we wanted to make certain trials. So as a combined

**Right: American infantrymen fire at German troops in the advance to relieve the surrounded garrison in Bastogne**

operation, we were always available to do whatever trials or manoeuvres the hierarchy want: that was the start of the preparations for D-Day."

Teacher would specifically be part of the RAF Beach Squadrons, which were an important element of the 2nd Tactical Air Force. For D-Day, the RAF had to provide close air support and fighter cover for the ground forces in the spearhead of the invasion. Aircraft had to be directed from the ground close to the front line and in order to provide that support, men and material were needed on the ground from the start. The role of the beach squadrons was to come ashore and establish themselves in designated areas to help with the large quantity of fuel, ammunition, equipment and vehicles that was needed to sustain the RAF in the weeks after D-Day.

Training for this complex and crucial operation was intense: "We were 100 per cent fit and then we used to practise a great deal of landings on all different types of surfaces: sands, grass verges etc. This was general training for the invasion. We did a lot of unarmed combat because we were carrying a lot of gear – food, ammunition, petrol, and water – so we weren't able to carry any armaments. We weren't allowed to carry revolvers, so we would have had to carry Sten guns or rifles, which was impossible because of all the equipment we'd be carrying from the landing craft."

As part of No.2 RAF Beach Squadron, Teacher was the main mechanic and serviced various vehicles such as Jeeps, motorcycles and trucks. The latter would feature most prominently in Teacher's war experience particularly when the unit took possession of Bedford QL trucks, a vehicle he describes as "very reliable, I never had any trouble with it in

all the 18 months that we had them." Teacher would experience D-Day driving a Bedford and during the preparations for the invasion he spent much time practising waterproofing his and others vehicles for a beach landing.

Because of the importance of the training involved, Teacher came into contact with two of the most famous British figures of WWII: Field Marshal Bernard Montgomery and King George VI. On 25 April 1944 the latter inspected a large parade of over 5,000 troops at Hiltingbury Camp. Most of the men were Canadian with some British Army units and all were wearing khaki uniforms with the exception of Teacher's RAF unit. He recalls: "I remember King George VI particularly. We were training for some 12 months with the command and were just in khaki, when all of a sudden someone from air

**"WE WEREN'T ALLOWED TO CARRY REVOLVERS, SO WE WOULD HAVE HAD TO CARRY STEN GUNS OR RIFLES, WHICH WAS IMPOSSIBLE BECAUSE OF ALL THE EQUIPMENT WE'D BE CARRYING FROM THE LANDING CRAFT"**

*After the Battle of the Bulge, Teacher had a brief rest in Brussels in February 1945. He is pictured (far left, holding glass) with his comrades in one of the few photographs taken during his war in Europe*



*Teacher was still in his teens when this picture was taken of him in his RAF uniform in 1942*









force hierarchy came down and said, "These lads have got to be dressed in blue." There was a big argument going on and he said "I'm very sorry but they are Royal Air Force, and RAF uniform is blue, so they will wear blue end of story." So we were issued with brand-new kit and it was about this time that the king came and inspected us all. We (about a group of 30 men) stood out like a sore finger, so the king wanted to know what this bit of blue was doing among all the khaki. He drove over in his Jeep and dismounted. We opened ranks and he inspected each one of us. We were highly delighted because it was one up for the RAF on the army! It was fabulous."

By contrast, Teacher's memories of Montgomery, the commander of all Allied ground forces for the invasion, were mixed: "He was a very moody man, one day he would be very sociable, another he wouldn't speak to anybody. He was always encouraging us and very optimistic that everything would go well. He was right at the end of the day but he made a lot of mistakes. He wouldn't listen to advice, he was always right and he always did what he wanted to do."

By the summer all preparations were complete for 'Operation Overlord' and Teacher drove his Bedford truck to Southampton on 5 June 1944. His was the last of three Bedford trucks (and the only one belonging to the RAF) to reverse onto a landing craft, which meant that he would be first off when it landed for the invasion. However, despite months of training and speculation Teacher didn't know what his destination would be: "We had no idea where we were landing, not even when we got there. We weren't told anything. I was waiting in a landing craft for about four hours before we went ashore and the coxswain wouldn't say where we were. I don't even know if he knew, certainly he wouldn't tell me if he did."

## D-Day

Amidst a choppy sea on 6 June 1944, Teacher sat on top of a truck and observed the vast armada he was part of: "It was unbelievable. You could not realise what was going on. There were thousands of ships and landing craft, battleships, destroyers, aircraft flying overhead... the noise was unbelievable. When the navy started bombarding a couple of hours before we went ashore, it was horrendous."

As the flotilla made its way south, Teacher remembers wanting to start what he had trained for months to do: "I just wanted to get on with it. I was just keen to get ashore and get started. We'd been trained repeatedly and now it was a case of putting it all into practice and seeing how well it went. As it happens it went very well indeed. The weather caused more damage than the enemy."

The official orders for the Beach Squadrons on D-Day were as follows: "Nos. 1, 2 and 4 RAF Beach Squadrons will work with the Army Beach Organisation to supervise the discharge of RAF

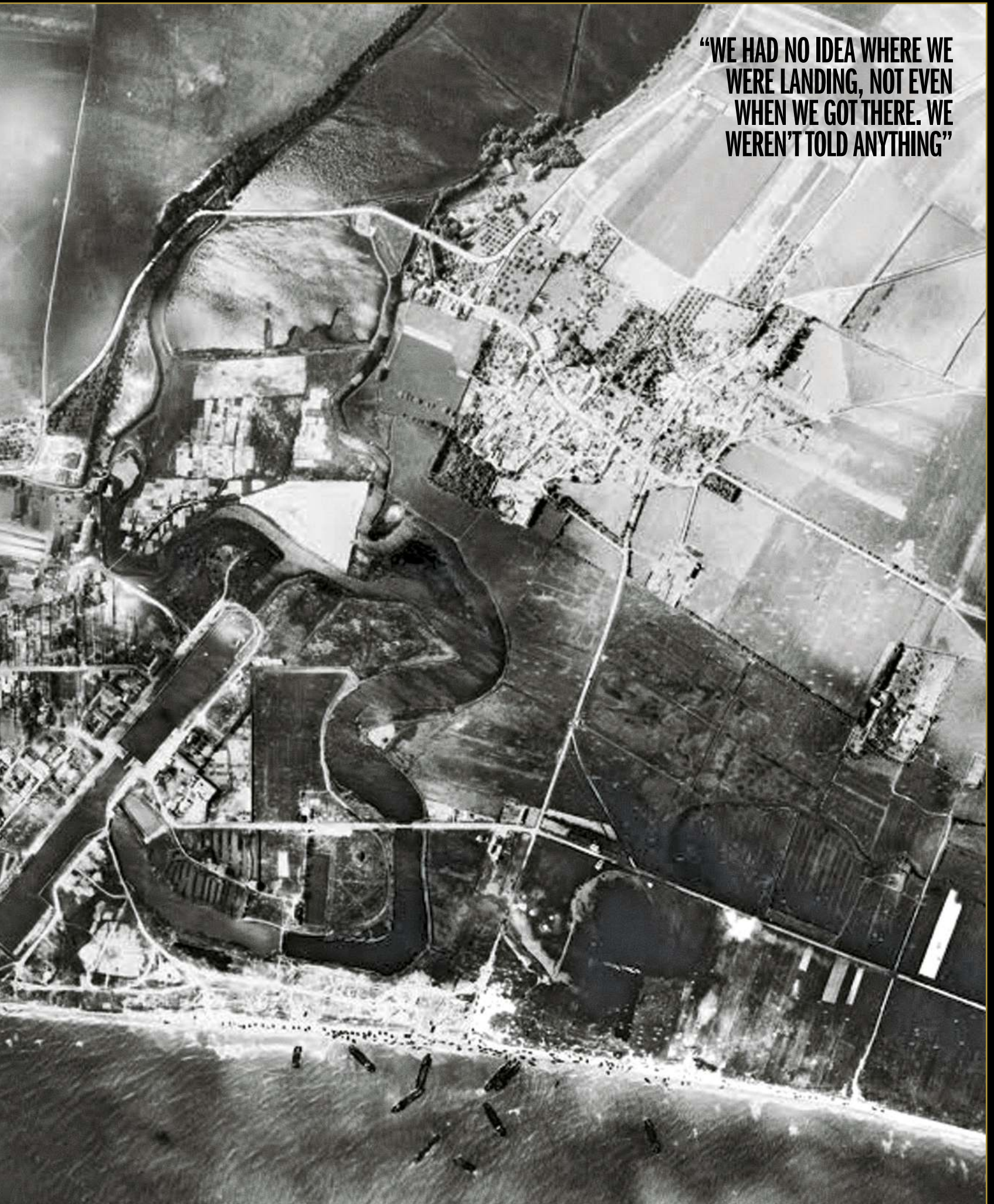
**"I JUST WANTED TO GET ON WITH IT. I WAS JUST KEEN TO GET ASHORE AND GET STARTED"**



*Mike Sector on Juno Beach around the time that Teacher landed at 8.20am on 6 June 1944. One of the dots on the beach near the landing craft is Teacher's Bedford QL truck*



**"WE HAD NO IDEA WHERE WE  
WERE LANDING, NOT EVEN  
WHEN WE GOT THERE. WE  
WEREN'T TOLD ANYTHING"**





personnel, vehicles and stores, and movement to the forward area of all units." The 'discharge' area for Teacher would be on Juno Beach.

Juno formed part of five Allied assault beaches along the Normandy coast. Two of these beaches, Omaha and Utah, were to be taken by the Americans, with the Commonwealth forces set to secure the remaining three. The Commonwealth beaches were codenamed after fish: Gold (fish), Sword (fish) and Jelly (fish). In the latter's case it was rumoured that Winston Churchill crossed out 'Jelly' and replaced it with the word 'Juno' after the Roman goddess.

The beach was a 10-kilometre stretch of coast centred around the small fishing village of Courseulles-sur-Mer and split into three sectors known as 'Love', 'Mike' and 'Nan'. Unlike Gold and Sword beaches, which were primarily assaulted by the British, Juno was in the hands of the Canadian 3rd Division. Their task would be to link up with Gold to the west and Sword to the east. Nevertheless, before the bulk of the Canadians could land, the beach units – including Teacher's – had to disembark and establish themselves.

**Right:** A heavily armed German machine gunner carrying ammunition boxes in the Ardennes, December 1944. Their tenacious fighting offensive put severe strain on the Allies in Belgium



Teacher vividly remembers the dicey start to his own landing in 'Mike' sector at 8.20am on 6 June: "I was one of the first to shore. It was very noisy, but the coxswain said, "I'm sorry Dave, but I'm going to have to drop you in deep water." I said "How deep?" He said, "I'm afraid to say very deep. Come on, let's get going" and he dropped the front part of the landing craft. I went into the sea and went down and down. It actually stopped sinking when the water was up to my chest. So I put it in gear, 4-wheel drive, and drove it to shore without any problems at all."

Once he had landed, Teacher drove to a sandy clearing known as a 'DVP' (Drowned Vehicle Park) where all broken down vehicles were to be stored. He left his Bedford there and returned to the beach: "Our job was to take in all the equipment, the food, ammunition – anything that was required to serve the army. So we were in control of the equipment that came through Juno Beach. We also had to make sure that all the troops that came ashore didn't run amok, but went through the safe areas that had been taped off. It was very well organised. It wasn't like in films where they dash off these landing craft and run. It was very well organised – they did not run amok. Obviously there were those who got injured, but generally speaking it went very well."

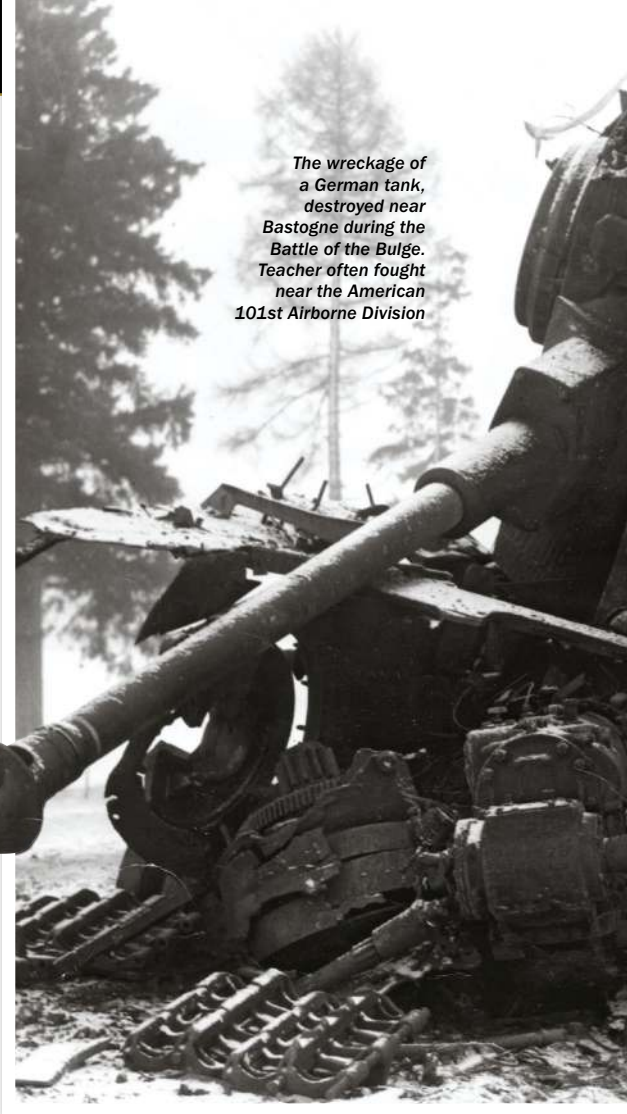
As a mechanic Teacher would also fix broken down vehicles and move them on as quickly as possible. Nevertheless he was under fire from the Germans who counterattacked using 88mm guns and aerial bombardment. Teacher witnessed landing craft being thrown in the air and survived an unexploded bomb that landed 6 metres away from him. Less than half a mile away from his position there was close quarter fighting with bayonets.

This intense scenario was Teacher's first experience of combat but his thorough training served him well: "You revert back to your training and you do what you were told to do. We were very well trained and we kept to the training moves and migrations and got through. In fact it went very easily. At around 4pm the Germans tried to attack, without any success. We had a couple of casualties then, but they were our only battlefield casualties of the campaign." This particular German attack was a heavy air bombardment with anti-personnel bombs in the beach maintenance area.

By the end of 6 June, 21,400 Allied soldiers had landed on Juno Beach but 1,200 had become casualties. Such was the German firepower it is estimated that in the first assaults each Canadian soldier had a 50-50 chance of survival. Nevertheless by the end of the day the Canadians had cleared exits off the beach and linked up with the British at Gold Beach. Teacher remembers them as, "Excellent lads. They were all young boys but very high-spirited, eager and very nice to get on with."

The RAF's own ground statistics for Juno on D-Day were impressive: 657 RAF personnel disembarked along with 75 tonnes of stores and 146 M T vehicles were landed. However, Teacher would not leave the area for months: "We weren't allowed

*The wreckage of a German tank, destroyed near Bastogne during the Battle of the Bulge. Teacher often fought near the American 101st Airborne Division*



## BEDFORD QL TRUCK

**THE TRUCK THAT DAVID TEACHER DROVE ON D-DAY WAS A HIGHLY ADAPTABLE AND FUNCTIONAL VEHICLE**

Manufactured by Bedford Vehicles, a subsidiary of Vauxhall Motors, the QL was one of the most widely produced trucks of the war with 52,247 being manufactured between 1941-45. Bedford was contracted by the British War Office to produce a three tonnes 4x4 general service truck in 1939 and it took only a year to develop from prototype to production, which was an impressive feat in a time of national crisis.

The QL was designed to use its four-wheel drive on rough terrain but it could also convert to front wheel drive on hard roads to ease the wear on tyres and the gearbox. It was known for its flexibility and could be used in a variety of roles. A QL could act as a troop carrier, field kitchen, tanker, cargo, communications and breakdown recovery vehicle. It could also be adapted to take attachments such as a Bofors gun tractor, fire tender, anti-aircraft guns and could even be converted into an office or signal van.

Teacher's association with the QL was not unusual as the RAF was one of its major operators and many were used as fuel tankers with swinging booms to refuel aircraft. This was somewhat ironic as the QL had a low fuel economy.



## "WE HAD NO LEAVE, YOU COULDN'T WRITE ANY LETTERS AND EVERYTHING WAS HEAVILY CENSORED"

off the beach. For three months we just took equipment in, food, ammunition, hospital equipment and anything that was needed for the army to run efficiently. All the wounded came back to our beaches, we sent them back home on landing craft."

Teacher remained on Juno Beach from 6 June until it was closed on 6 September 1944. The unit was shelled almost every day as the Germans could fire with 88mm guns from miles away. There were also continual problems with flies that were attracted to dead bodies. To compound matters, Teacher was constrained by censorship: "It was still very secretive. We had no leave, you couldn't write letters and everything was heavily censored. We also weren't allowed any contact with the local population at all. That was it, we just got on with what we had to do."

Nevertheless by the time Teacher left Juno, the combined operations units had discharged a total of 20,650 tonnes of stores, disembarked 30,728 personnel and landed 8,644 vehicles. Along with similar impressive feats from the other beaches, there was now no going back and Teacher's own war in Europe was far from over.

### Battle of the Bulge

After a short spell in England, Teacher was transferred to No. 2742 Squadron, RAF Regiment. Initially designed for defensive security purposes, 2742 Squadron was reconfigured to become a reconnaissance unit. Teacher's job was to maintain and drive the vehicles of the squadron that belonged to 'A' flight. These included a Bedford truck, one Jeep and BSA motorcycle, an American Dodge truck and five Humber Super Snipe cars.

Teacher quickly returned to the continent in September and by December he was recovering in a Brussels hospital after a motorcycle accident. The 2742 Squadron was supposed to spend Christmas 1944 in Ghent but only a week after leaving hospital, Teacher's unit was assigned to work with the US 8th Corps at Bastogne. The Belgian town was close to the Luxembourg border and only 80 kilometres

*Below: QL trucks proved to be so reliable that they remained in service with the British armed forces until the early 1960s*



*Right: As of writing, David Teacher is planning to drive a Bedford on Juno Beach once more for the 73rd anniversary of the D-Day Landings on 6 June 2017*





# THE BRITISH AT THE BULGE

**ALTHOUGH THE BATTLE IN THE ARDENNES WAS PRIMARILY FOUGHT BETWEEN THE US ARMY AND THE WEHRMACHT, TENS OF THOUSANDS OF BRITISH TROOPS ALSO TOOK PART**

It is estimated that along with 500,000 American soldiers, approximately 55,000 troops of the British Army (including Canadians) fought in the Battle of the Bulge.

On 19 December 1944, Supreme Allied Commander Dwight D Eisenhower placed all Allied forces north of Givet and Prüm under the command of Field Marshal Bernard Montgomery. British troops from XXX Corps halted the advance of the 2nd Panzer Division on the River Meuse on 24 December and heavy casualties were incurred in three days of fighting from 3 January 1945. By 8 January the German High Command realised that their attack had failed but fighting continued against their rearguard. Montgomery then ordered XXX Corps back to the Netherlands eight days later.

Although he would later exaggerate the British contribution to the battle, their defence of the northern sector was a valuable contribution. Casualties were also high with around 1,400 killed, wounded or missing.

*Montgomery and Eisenhower (right), 1944. The two allies clashed during the Battle of the Bulge with Montgomery undiplomatically quipping that American troops made great fighting men when given proper leadership*



*An explosion in the area of Juno Beach during D-Day. Although Teacher stayed on the beach for months afterwards, his unit was shelled almost every day*



away from German territory. Teacher arrived on 17 December and his sudden deployment was a surprise: "We weren't told where we were going, and were given 30 minutes' notice to set off. The weather was terrible, it was just starting to snow and we finished up in the Bulge." It was unfortunate timing as the Battle of the Bulge had just begun.

This huge battle was the last major German offensive campaign in western Europe and Hitler's last gamble to halt the Allied advance. The overall plan was to drive a wedge through Allied forces, break them in two and recapture the port of Antwerp. In an eerie repeat of the Battle of France, the Germans completely surprised thinly defended Allied lines in the Ardennes forest and the resulting advance made a literal 'bulge' on military maps. Half a million German soldiers, including 13 infantry divisions and seven armoured divisions, were aided by poor weather conditions that prevented Allied air attacks from assisting the beleaguered troops on the ground. The vast majority of Allied troops in the Ardennes were American but around 55,000 troops serving in the British armed forces, including Teacher, also fought in the battle.

Bastogne was an important strategic crossroads in the Ardennes and approximately 11,000 American troops quickly became besieged by around 54,000 German soldiers from 20 December. 2742 Squadron's task was to seek out German units and report their position in the area near Bastogne. Teacher was largely positioned around Marche-en-Famenne, 32 kilometres north west of Bastogne from 21 December: "We were near the 101st Airborne Division: we were only yards from them in many places. It's strange to think what a small world it is!"

Fighting conditions during the battle were notoriously difficult: "We were in or near Bastogne for weeks... it was cold, wet and miserable. We had no food or heat. The snow was 6-foot deep. The temperature was extremely low and we were in summer uniform. It wasn't pleasant."

Teacher and the other members of 2742 relied on the Americans to keep the squadron going: "We were depending on the Americans for food and fuel. As I was the driver and

mechanic, it was my job to bring up rations and supplies. I saw more of the Yanks than most people did. They were very nice lads, doing a great job under difficult conditions. It was organised chaos. There was no day or night, it was just cold, dark, wet and miserable."

No fires were permitted during the battle and Teacher still had to run the engines of his vehicles every 15 minutes to prevent the fuel freezing in temperatures as low as -18 degrees Celsius. Nevertheless, despite the conditions Teacher's diligence did not go unnoticed and it was noted in the squadron's records: "Vehicle maintenance in these testing conditions has been first class." Teacher puts it more modestly, "We came out of the battle in late December 1944, early January 1945, after four and a half weeks of fighting. It was a long stretch. We were under constant attack and those four weeks were the worst experience of my service, but we survived."

## The invasion of Germany

Bastogne was eventually relieved on 26 December 1944 and Teacher left the battlefield a few days later. After a brief rest in Ghent and Brussels, 2742 Squadron was ordered to prepare for the invasion of Germany. On 15 March 1945 Teacher crossed the River Rhine into Germany: "We were the first RAF ground unit to cross the Rhine but obviously aircraft had been over in the sky beforehand."

As one of the first RAF units to enter the heart of the Nazi regime, Teacher was understandably nervous: "We were all very concerned. We'd fought the enemy without really seeing them, and we wondered how determined they would be to defend their own Fatherland." However, he was surprised when armed resistance fell away inside Germany: "As it turns out it was a doddle by comparison to the rest of the war. They did not put up a great fight in Germany itself, they kept surrendering and the biggest problem then was taking prisoners."

Nevertheless, Teacher was not spared the full horrors of Nazi brutality. When Buchenwald concentration camp was liberated by American forces in April 1945, Supreme Allied Commander Dwight D Eisenhower insisted that all Allied personnel within the vicinity had to go past the camp. Some 250,000 people had been imprisoned at Buchenwald between 1937-45





*Eisenhower views the bodies of prisoners in Buchenwald concentration camp, 12 April 1945. He ordered every Allied personnel within the vicinity, including Teacher, to pass through the camp to prevent Holocaust denial*

More details about David Teacher's life and military career can be found in his 2016 autobiography *Beyond My Wildest Dreams*. Turn to page 92 to find out more.

and although exact mortality figures can only be estimated, at least 56,000 prisoners were murdered, including 11,000 Jews. When the Americans liberated the camps they found 21,000 emaciated and starved prisoners as well as piles of dead bodies. Eisenhower wanted as many men as possible to see the camp because he believed, "the day will come when some son of a bitch will say this never happened."

Teacher was one of those ordered to witness the horror and although he is Jewish, he is keen to note that the camp's victims did not just include Jews: "We went past Buchenwald just after it had been liberated, we were probably one of the first of the general bulk of the army to see what went on. I don't think it makes a difference being Jewish or not. There were atrocities committed to non-Jewish people as well. Anyone who wasn't Aryan was rubbish, and treated as such."

His experience at Buchenwald reinforced his already low opinion of the Germans and the brutalities they inflicted on civilians: "They were a determined lot, but to me the only good German was a dead German. I still don't have much respect for them. We saw some terrible atrocities that they had committed: burning churches, women and children being tortured and general maltreatment. The thing that upset me was that afterwards they used to run around firing their weapons in the air, it wasn't nice."

By VE Day on 8 May, Teacher and the RAF Regiment was approximately 80 kilometres from

## **"EISENHOWER WANTED AS MANY MEN AS POSSIBLE TO SEE THE CAMP BECAUSE HE BELIEVED, "THE DAY WILL COME WHEN SOME SON OF A BITCH WILL SAY THIS NEVER HAPPENED"'"**

Berlin and he was relieved that the Russians would take the German capital: "We had no choice. We were told the Russians would get there first, and to be honest we were quite happy about it because of the casualties. The Russians had lost 250,000 men just taking Berlin and those could have been our casualties. So those were lives saved. The Russians were more than happy to do it." Having been through so much since D-Day, Teacher (still only 21 years old) was relieved the war had ended: "It was a great relief when the fighting was over. It was inevitable it was going to happen and there was no doubt about how it was going to end, so the sooner it ended the better."

After a short spell back home Teacher was posted to the Azores en route to the Far East but the Japanese surrendered and he was eventually de-mobbed in December 1946.

### **Recognition**

In the years since the war, Teacher has been heavily involved in charity work and was subsequently awarded an MBE for his work with ex-service organisations in Greater Manchester. In 2015 he was also awarded the Légion

d'honneur by the French government after President François Hollande officially recognised all surviving British veterans who fought for the liberation of France between 1944-45.

Since 2015, Teacher has volunteered at Imperial War Museum North in Stretford, Manchester and speaks to school parties and adults, averaging around 2,000 people per month. He enjoys hearing the varied and occasionally humorous questions from schoolchildren: "The main thing is about food, "What did you get to eat?" and sometimes I'm asked, "How did you charge your mobile phone?" They are very receptive: some are very knowledgeable and others are curious. I go twice a week to IWM North, its very enjoyable."

As for his own dramatic experiences during the war, Teacher's main memories are positive despite the frequently horrific events he endured: "I enjoyed every minute of it. I enjoyed the comradeship including the hardships, because we all went through it together. I enjoyed my service career immensely, its something I would do again if I had to – I wouldn't hesitate. It was a wonderful way of life, no doubt about it."



# MIDWAY

Despite an overwhelming advantage in numbers, the Japanese offensive against Midway failed in the face of superior American intelligence gathering

WORDS WILLIAM E WELSH

*The Yorktown at the moment it was struck by a Japanese aircraft-launched torpedo*





## CENTRAL PACIFIC OCEAN 4 JUNE 1942

**D**auntless dive bombers from the US aircraft carrier *Enterprise* spotted the Japanese fleet north of Midway Atoll at 10:05am on 4 September 1942. They closed on it and queued up in a single line at 19,000 feet for their attack. The air group commander barked instructions for the 33 dive bombers to attack the heavy carriers *Kaga* and *Akagi*, but in the confusion of battle most of the aircraft went after the 38,200-ton *Kaga*. 15 minutes later, the metal birds swooped down on their prey.

The flight deck of the mighty *Kaga* was packed with aircraft. Air crews were refuelling Zero fighters and making last-minute adjustments to fully armed bombers that were minutes away from launching against the US carrier strike force. "Dive bombers!" shouted a lookout on the *Kaga* as the Dauntless aircraft began releasing their 500-pound bombs at 2,500 feet. "I saw this glint in the sun – it looked like a beautiful silver waterfall – these were the dive bombers coming down," said Lt Cdr John S 'Jimmy' Thach, a fighter pilot from the *Yorktown* who witnessed the attack.

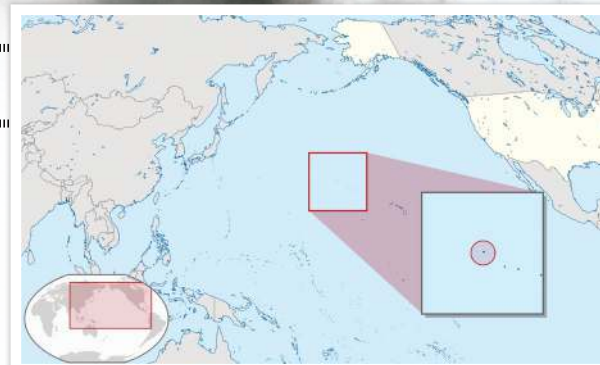
The first bomb struck the *Kaga* starboard aft among the aircraft waiting to launch. The second and third exploded near the forward elevator, one of them penetrating to the hangar deck, where it set off secondary explosions among armed bombers waiting to be sent to the flight deck. The fourth bomb struck

amidships on the port side. The survivors abandoned ship. At dusk, a pair of internal explosions rocked the great vessel, and she rolled over and sank.

Before the day was over, the Imperial Japanese Navy's other three large carriers participating in the Battle of Midway suffered the same fate. The titanic battle for supremacy in the Pacific would only cost the US Navy one of its valuable carriers. In a single day, the Americans wrested the initiative in the Pacific theatre from the Japanese.

### Two Offensives

Following the initial clash between Japanese and United States aircraft carriers in the Coral Sea in May 1942, the Japanese sought to return to the offensive against the US. The Americans had landed a heavy psychological blow against the Japanese by the daring long-range bomber strike against Tokyo known as the Doolittle Raid in April 1942. The following month, Japanese and American aircraft carriers clashed for the first time in the Coral Sea. These two events spurred Admiral Isoroku Yamamoto to devise a comprehensive plan whereby the Japanese would retake the momentum from the Americans.



## OPPOSING FORCES



vs



**LEADERS:** Admiral Isoroku Yamamoto, Vice Adm Chuichi Nagumo

**CARRIER AIRCRAFT:** 261

**LAND-BASED**

**AIRCRAFT:** 0

**HEAVY AIRCRAFT**

**CARRIERS:** 4

**WARSHIPS:** 80

**LEADER:** Admiral Chester Nimitz, Rear Adm Jack Fletcher, Rear Adm Raymond Spruance

**CARRIER AIRCRAFT:** 233

**LAND-BASED**

**AIRCRAFT:** 115

**HEAVY AIRCRAFT**

**CARRIERS:** 3

**WARSHIPS:** 20

**"THE TITANIC BATTLE FOR SUPREMACY IN THE PACIFIC WOULD ONLY COST THE US NAVY ONE OF ITS VALUABLE CARRIERS"**



Burning oil tanks hit by Japanese bombs on Sand Island in the Midway Atoll on 4 June



Yamamoto wanted to extend the Japanese empire's eastern perimeter into the Central Pacific to furnish a greater buffer for Japan's home islands. To do this, he drew up a plan for his Combined Fleet to capture Midway Atoll, an outlier of the Hawaiian Islands located 1,300 miles northwest of Pearl Harbor.

The objective of Yamamoto's offensive was to capture Midway in order to use its airstrip to project Japanese airpower deep into the Central Pacific Ocean. Yamamoto's grand plan called for a two-pronged offensive that would employ a vast array of surface warships, submarines, transports and support vessels.

Operation Aleutian Islands (Operation AI) was a feint designed to draw one of the US carriers to the northern Pacific. To execute the operation, Rear Admiral Kakuta's Second Carrier Strike Force had 40 attack aircraft on the light carriers the *Ryujo* and *Junyo*. Kakuta was to send his carrier aircraft on 3 June to bomb Dutch Harbour, the principal port in the Aleutians, while Japanese amphibious forces landed on Attu and Kiska Islands at the tip of the Aleutian Chain.

The main attack, known as Operation Midway Island (Operation MI), would go forward the following day. Yamamoto planned to devote the bulk of the Combined Fleet's forces to the operation. Vice Admiral Chuichi Nagumo,

the hero of the attack on Pearl Harbor, would once again have the same four heavy carriers – *Akagi*, *Kaga*, *Soryu* and *Hiryu* – that he had used in the surprise attack six months earlier.

On 4 June, Nagumo was to take up a position 300 miles northeast of Midway and launch aircraft from his First Carrier Striking Force to pulverise Midway's defences in preparation for the amphibious landing. Nagumo's carrier force would have 261 aircraft as its offensive arm.

Other large forces would follow behind Nagumo's carrier group. Rear Admiral Raizo Tanaka's invasion force of 5,000 troops in a dozen transports would rendezvous off west of Midway with Vice Admiral Nobutake Kondo's Second Fleet, which would escort them to their objective. Bringing up the rear would be the First Fleet's Main Force under Yamamoto, which would deploy 300 miles west

of Nagumo. Yamamoto would direct the various components of the operation from his flagship, the gigantic battleship *Yamato*.

### The unsinkable carrier

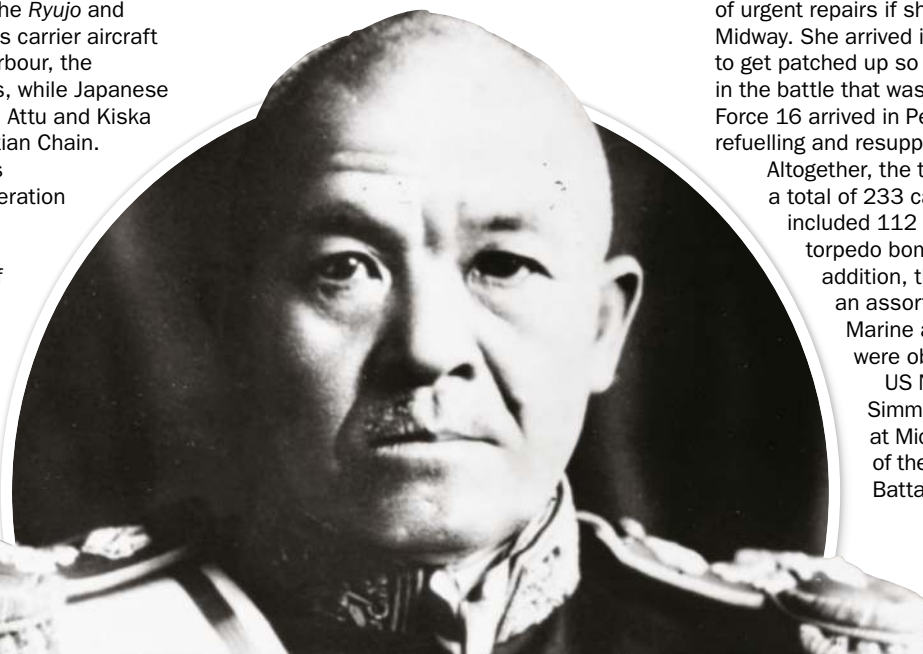
Following the action in Coral Sea, US Pacific Fleet commander Admiral Chester Nimitz recalled Task Force 16, which was built around the carriers *Hornet* and *Enterprise*, to return to Pearl Harbor. Its veteran commander, Vice Admiral William Halsey, was seriously ill, and Nimitz replaced him with neophyte Rear Admiral Raymond Spruance.

Overall command of the two task forces went to Rear Admiral Frank Fletcher, commander of Task Force 17, who had performed ably in the Coral Sea. The nucleus of Task Force 17 was the carrier *Yorktown*, which had sustained major damage in the same skirmish, and was in need of urgent repairs if she were to participate in Midway. She arrived in Pearl Harbor on 22 May to get patched up so that she could take part in the battle that was brewing. Meanwhile, Task Force 16 arrived in Pearl Harbor on 26 May for refuelling and resupply.

Altogether, the two US task forces had a total of 233 carrier aircraft, which included 112 dive bombers, 42 torpedo bombers and 79 fighters. In addition, the Americans possessed an assortment of 115 Navy and Marine aircraft, many of which were obsolete, on Midway Atoll.

US Navy Captain Cyril Simmard, the senior commander at Midway, had 3,650 troops of the Sixth Marine Defense Battalion and multiple anti-

Right: Chuichi Nagumo was one of the Imperial Japanese Navy's (IJN's) most seasoned officers and hero of the Pearl Harbor attack



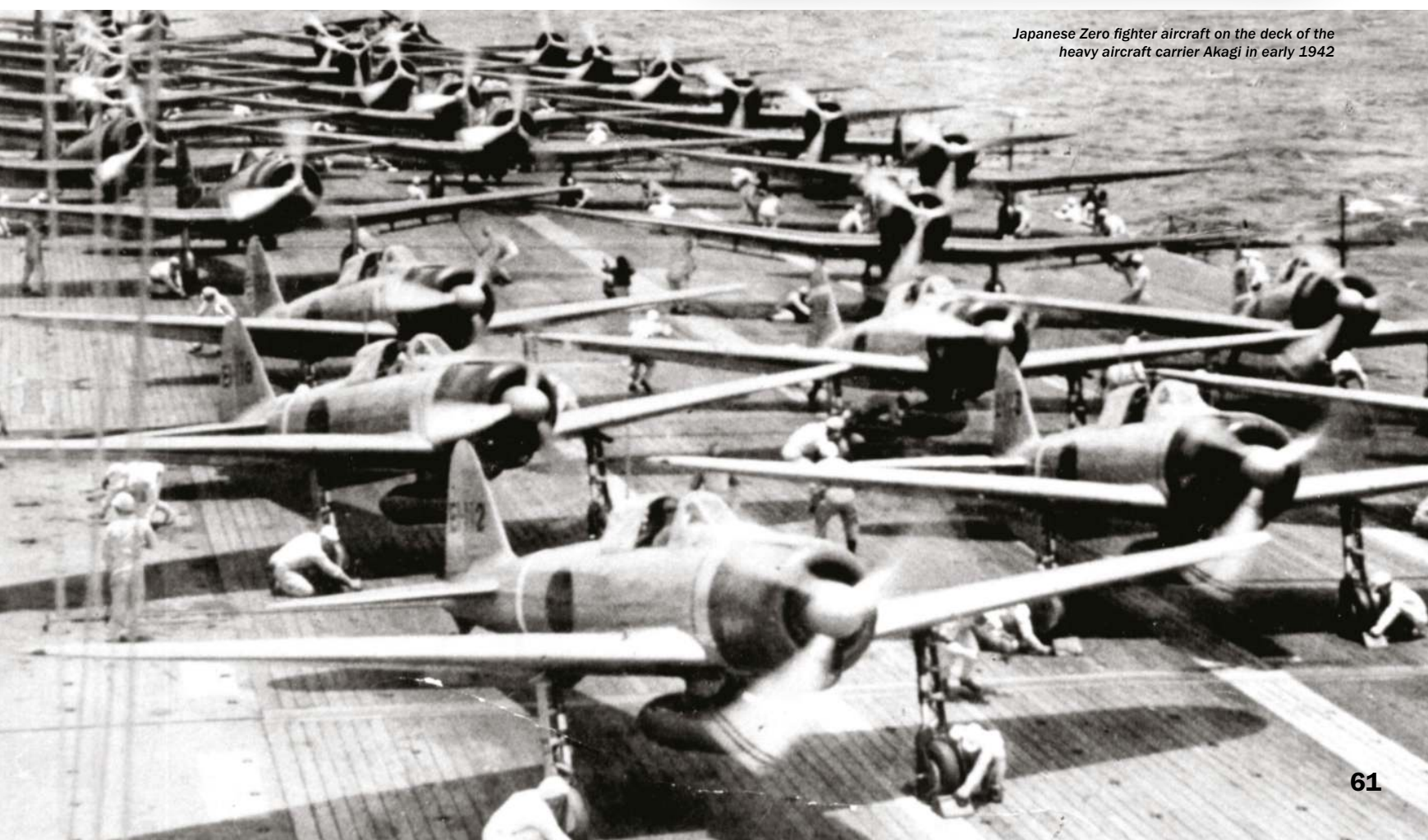


*A squadron of Douglas TBD  
Devastator torpedo bombers  
unfold their wings in preparation  
for takeoff from the Enterprise*



**“YAMAMOTO’S GRAND PLAN CALLED FOR A TWO-PRONGED OFFENSIVE  
THAT WOULD EMPLOY A VAST ARRAY OF SURFACE WARSHIPS,  
SUBMARINES, TRANSPORTS AND SUPPORT VESSELS”**

*Japanese Zero fighter aircraft on the deck of the  
heavy aircraft carrier Akagi in early 1942*





aircraft batteries with which to defend the Midway against the expected amphibious attack.

The air group that Simmard commanded at Midway would function as an "unsinkable aircraft carrier" that would help balance the Japanese advantage in carriers. Both Yamamoto and Nimitz knew that whoever won the battle in the sky would control the island when the battle was over.

Yamamoto did not expect the US Pacific Fleet to be in a position to contest the invasion force. The Japanese mistakenly believed that both the *Lexington* and *Yorktown* had been destroyed in the Coral Sea. The Americans had indeed lost the *Lexington* at Coral Sea, but not the *Yorktown*. As for the other US carriers, the *Enterprise*, *Hornet* and *Saratoga*, the Japanese had no idea where they were in the Pacific. The *Saratoga* was unavailable for Midway because it was undergoing extensive repairs in Puget Sound following a Japanese submarine attack in January 1942.

### Intelligence failure

Although the Imperial Japanese Navy had destroyed the American battleships in its Pearl Harbor attack on 7 December 1941, it had failed to catch any of the American carriers in the harbour. Yamamoto believed that the American aircraft carriers would sortie from Pearl Harbor once the invasion was in full swing. At that point, Nagumo and Yamamoto would team up against the weaker US Pacific Fleet and destroy it in a decisive battle that would compel the United States to sue for peace.

To monitor the movements of the US Pacific Fleet, Yamamoto ordered Vice Admiral Teruhisa Komatsu to deploy his fleet of ten submarines in an arc between Hawaii and Midway no later than 2 June to watch for the US aircraft carriers. The only way the Japanese would know how many they would be up against at Midway was from Komatsu's submarines and from scout planes launched by Nagumo's fleet once it had arrived north of Midway.

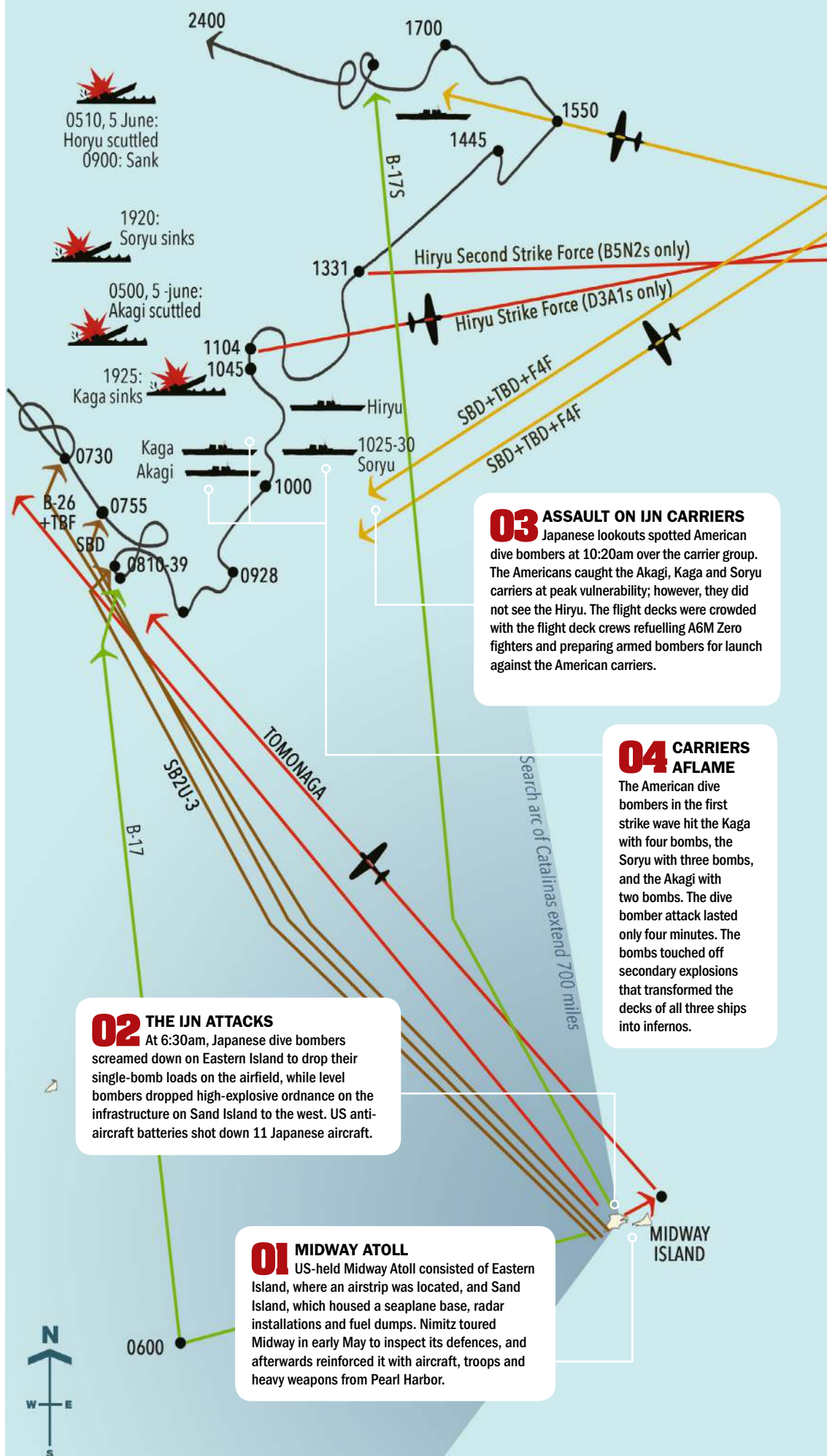
Through back-breaking effort, the US combat intelligence unit at Pearl Harbor gleaned that the Aleutians strike was nothing more than a diversion, and that the real objective was Midway. The intelligence data spurred Nimitz to put his two task forces into position northeast of Midway to ambush Nagumo's carrier strike force. Both US task forces included cruisers and destroyers with which to screen their carriers from attack by Japanese carrier aircraft and submarines.

During the last week of May, both sides sailed for the waters around Midway. Nagumo's carrier group departed from Japan on 27 May, and other elements followed over the next several days both from Japan and the Marianas Islands. Meanwhile, Task Force 16 sailed from Pearl Harbor on 28 May, and it was followed two days later by Task Force 17. Both task forces were in position 350 miles north of Midway before the Japanese submarines were in place between Oahu and Midway. The result was an intelligence failure for the Imperial Japanese Navy that would leave Nagumo's carrier group vulnerable to a first strike by the American carriers.

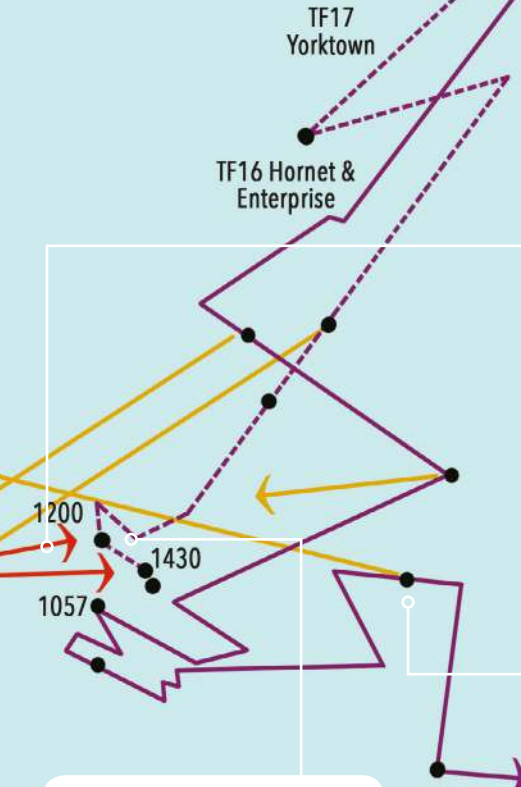
While Nagumo's carrier group moved into position north of Midway, Admiral Kakuta sent

# BATTLE OF MIDWAY

4 JUNE 1942







## 06 TORPEDO STRIKE

A second strike wave from the Hiryu composed of ten Japanese torpedo bombers, escorted by six Zeros, approached the Yorktown at approximately 5pm. Of the five bombers that managed to launch their torpedoes, two hit their already stricken carrier. The torpedoes slammed into the port side of the Yorktown, damaging her fuel tanks and boilers.

## 07 HIRYU IS CRIPPLED

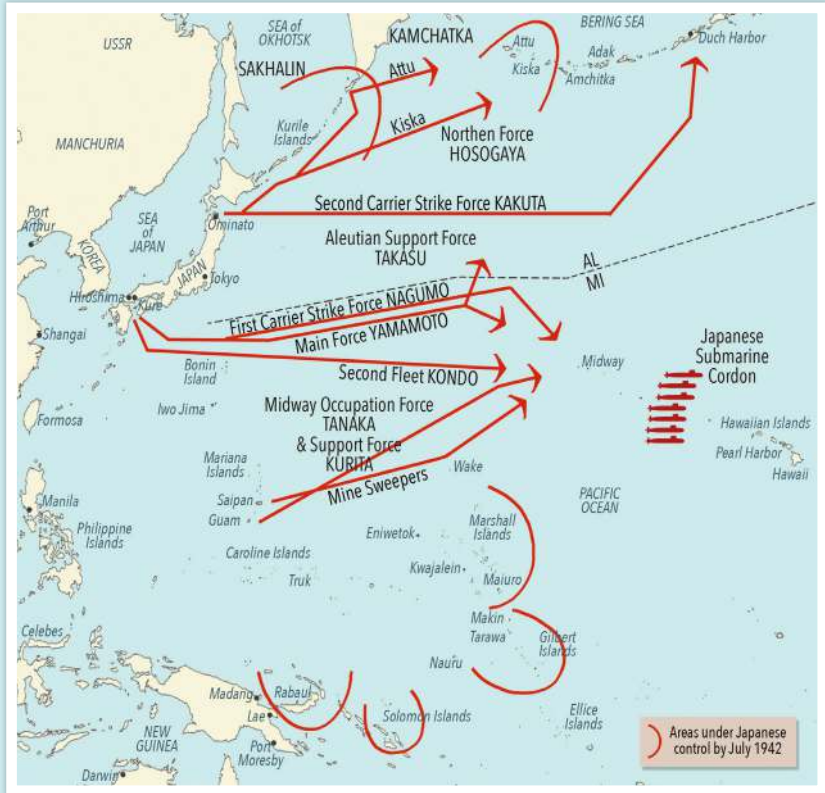
A second strike wave composed of dive bombers from the Enterprise and Hornet hit the Hiryu with four bombs at 5pm. Two bombs landed amidships, and two bombs struck the fore deck. The bombs penetrated to the hanger deck, where they set off secondary explosions that ruptured the hull plates below the water line and cause flooding.

## 05 YORKTOWN ATTACKED

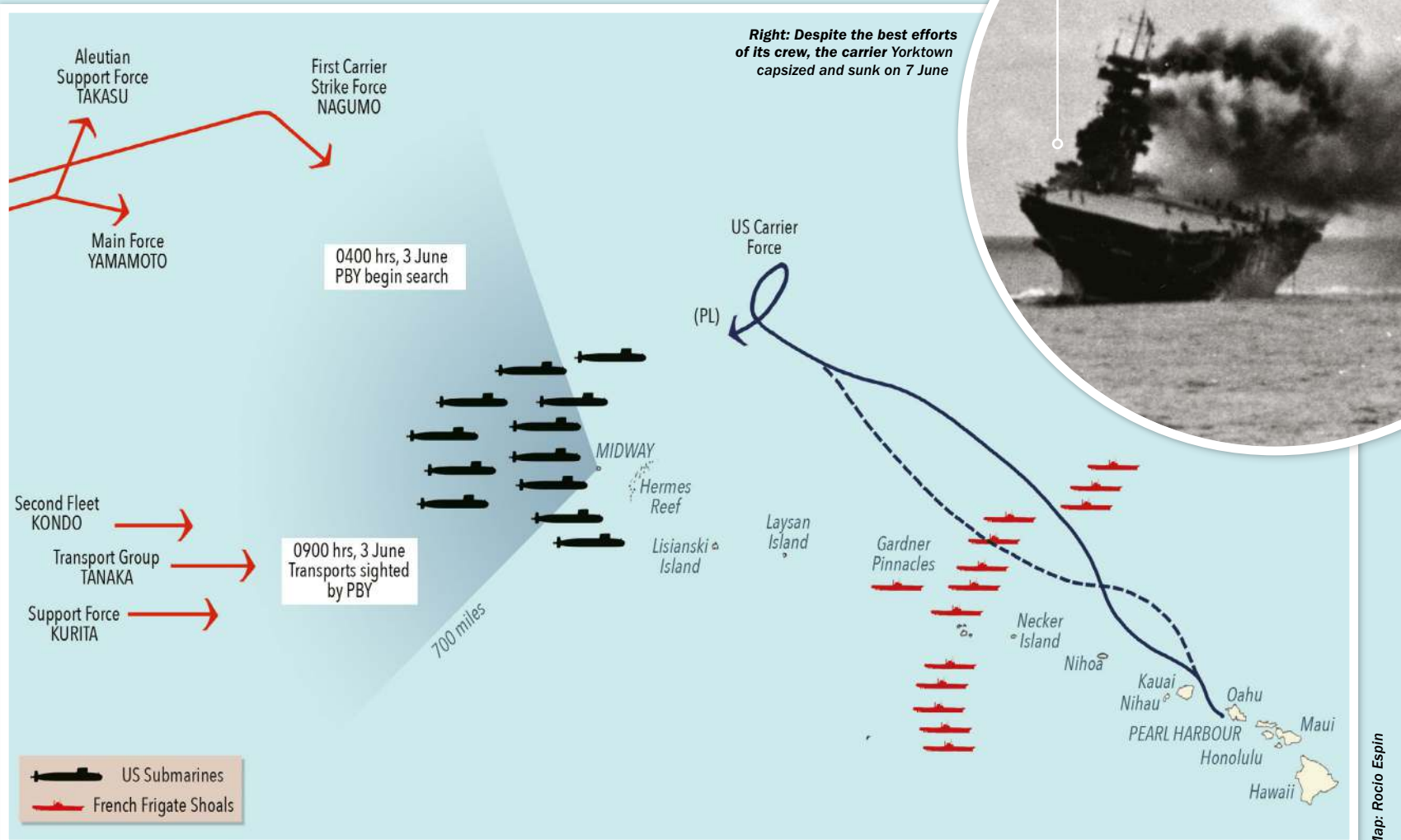
18 dive bombers escorted by six fighters from the Hiryu attacked the Yorktown at Noon. Three bombs struck the deck of the carrier. One bomb struck the forward flight deck, another struck the aft flight deck and penetrated the funnel, and yet another hit the number one elevator on the aft deck.

## 08 YORKTOWN SINKS

Salvage crews worked tirelessly on the Yorktown, which was listing badly, in an effort to save her. But in the early afternoon of 6 June, Japanese submarine I-168 snuck up on the Yorktown and launched a spread of torpedoes. Two hit the Yorktown, causing her to sink on the following morning.



- Japanese Air Strikes A6M, B5N2, D3A1
- Midway Land Based Air Army B-26, Navy TBF, Marine Corps SBD, SB2U-3
- Midway Based Army B-17s
- US Navy Carrier Air Strikes SBD, TBD, F4F







Survivors from Yorktown transfer between USS Portland (right) and USS Fulton (Left)



The Japanese cruiser Mikuma burns after repeated bombing attacks launched from Enterprise and Hornet



This artwork was commissioned for the film The Battle Of Midway (1976), directed by Jack Smight

strike aircraft from his two light carriers on 3 June to bomb Dutch Harbour. Nimitz sent a task force to counter the Japanese thrust in that sector, but he did not send any of his prized carriers. The feint failed to draw off a US carrier.

The Japanese carriers began launching 108 aircraft to bomb Midway at 4:30am on 4 June. Lieutenant Joichi Tomonaga led a strike group that comprised 36 each of Mitsubishi A6M Zeroes, Aichi D3A1 dive bombers and Nakajima B5N bombers. The Americans used easy-to-pronounce names to report sightings of Japanese aircraft. Thus, 'Val' and 'Kate' were the names appropriated for the Aichi D3A1 dive bomber and the Nakajima B5N bomber. The Kate bombers could be configured either for torpedo missions or for level bombing from high altitude. The Vals carried one 550-pound bomb, and the Kates one 1,760-pound high-explosive bomb. For the first strike wave against Midway, the carriers *Hiryu* and *Soryu* launched their Kates, and the *Akagi* and *Kaga* unleashed their Vals.

Midway radar picked up the incoming hostile aircraft when they were 93 miles out. Air raid sirens wailed as the pilots of the Navy and Marine aircraft scrambled to get aloft in order

to avoid near-certain destruction if the aircraft had remained on the ground. 25 minutes later, the airfield was empty. The motley group of US fighters and bombers flew north directly toward the incoming Japanese aircraft.

Sporadic dogfights between the incoming Japanese and outgoing American aircraft from Midway broke out 30 miles from the atoll. Japanese Zeros peeled off from the strike wave to engage the American aircraft, while the Japanese bombers continued on to Midway. Likewise, the US dive, torpedo and level bombers from Midway continued flying north in search of the Japanese carriers.

After his strike group had bombed Midway at 6:30am, Tomonaga radioed Nagumo that another strike was needed to ensure maximum damage to the airstrip and other infrastructure.

## Nagumo's Dilemma


Earlier that morning, at 5:52am, PBY Catalina pilot Lieutenant Howard Ady reported sighting two Japanese carriers and reported their bearing, course and speed. Upon hearing the report, Fletcher ordered Spruance to close with the Japanese carrier group and launch his bombers.

Nagumo had only a fraction of the number of search planes looking for the Americans as they had looking for him. At dawn, five Japanese warships launched a total of seven search aircraft. In contrast, the Americans had 33 PBY Catalinas based at Midway, and they had been searching since 30 May for the approaching Japanese warships. This gave the Americans a considerable advantage in aerial reconnaissance, and enabled them to spot the Japanese carriers early in the battle. Early sightings had enabled the Americans to send Boeing B-17 Flying Fortresses against the Japanese warships, but they missed their targets.

While the first wave of Japanese aircraft was assaulting Midway Atoll, Nagumo's air crews were arming a second wave of aircraft to strike the American carriers once they were located. In anticipation of a second strike wave against the American carriers, Nagumo had his air crews arming 'Vals' with armour-piercing bombs and 'Kates' with torpedoes, both highly effective against ships.

Upon receiving Tomonaga's message calling for a second strike against Midway, Nagumo issued orders at 7:15am for the air crews to arm the Vals and Kates for a second strike





**"NAGUMO BELIEVED IT WAS IMPERATIVE TO COMPLETELY DESTROY THE AIRSTRIP SO THAT ENEMY AIRCRAFT COULD NOT LAUNCH REPEATED SORTIES AGAINST HIS CARRIERS"**

against the atoll, rather than the unsighted carriers. Nagumo believed it was imperative to completely destroy the airstrip so that enemy aircraft could not launch repeated sorties against his carriers.

The Japanese air crews had to rush to arm the Vals on the hangar decks of the *Hiryu* and *Soryu* with high-explosives rather than armour-piercing bombs, and to take the torpedoes off the Kates on the *Akagi* and *Kaga* and replace them with high-explosive bombs. The crews needed to work at breakneck speed, because soon the carriers would have to recover the aircraft returning from Midway.

Nagumo received a report at 7:30am that dramatically altered the situation. The pilot of a Japanese floatplane from the cruiser *Tone* accompanying the First Carrier Fleet reported spotting warships of an enemy task force 240 miles northeast of Midway. 50 minutes later, he confirmed the presence of an enemy carrier in the task force.

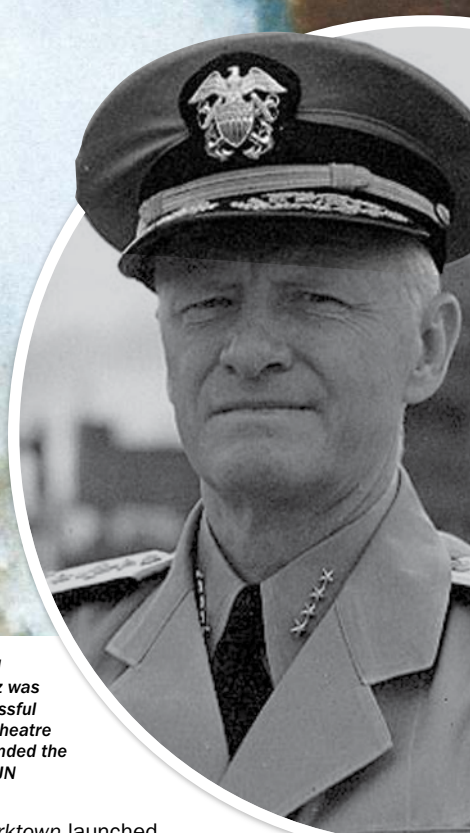
The report from the *Tone* rattled Nagumo and his staff, as they had not expected the carriers of the US Pacific Fleet to be so close to Midway that early in the battle. After learning of the presence of an American task force, Nagumo

issued orders at 7:45am for the air crews to leave the torpedoes on any Kates they had not yet reconfigured with high-explosive bombs.

At 7am, the first strike wave of 121 aircraft took off from the *Hornet* and *Enterprise*. Air Group Commander Stanhope Ring led the *Hornet's* 60 aircraft, and Lieutenant Commander Wade McClusky led the *Enterprise's* 61 aircraft. As the US bombers and fighters raced toward the Japanese carriers, the US land-based dive and torpedo bombers from Midway were approaching Nagumo's carriers from the south.

Nagumo's fleet had assumed a box formation, with the screening warships protecting the carriers inside the perimeter. Inside the box, the carriers zigzagged or sailed in wide circles to avoid being struck by enemy torpedoes. The strike aircraft from Midway arrived in small groups over the course of a 90-minute period. However, they failed to register hits, and were either shot down or ward off.

Fletcher, who retained a large number of the *Yorktown's* aircraft for a follow-up attack, ordered the *Yorktown* to launch 35 aircraft to join the first strike wave at 8:30am. Shortly



**Right: Admiral Chester Nimitz was a highly successful in the Pacific theatre and masterminded the defeat of the IJN**

after the *Yorktown* launched her planes, the Japanese carriers began recovering Tomonaga's aircraft. He ordered his fleet to turn east-northeast in preparation for a strike against the American carriers. The US strike aircraft from Midway had completed their attacks at by 9:30am. Nagumo and his subordinates knew that more attacks were coming, and they rushed to get the Vals and Kates ready for the strike against the American carriers.

Nagumo's course change confounded the dive bomber formations looking for the Japanese carriers. Both Ring and McClusky arrived at the position where they expected the enemy fleet to be only to find open ocean below them. Ring failed to locate the enemy and landed to refuel at Midway. However, McClusky turned north at 9:35am in the hope of finding the enemy before having to abort his strike and return to the *Enterprise*. The torpedo bomber



The burning Japanese aircraft carrier *Hiryu* with its flight deck collapsed following an attack by American dive bombers

Midway Atoll contained an airfield essential to Japanese plans to expand into the Central Pacific

**“THE RESULT WAS CATASTROPHIC, WITH NEARLY ALL OF THE AIRCRAFT BEING SHOT DOWN WITHOUT REGISTERING A SINGLE TORPEDO HIT”**

Although McClusky intended for his 33 dive bombers to split into two groups to attack the *Akagi* and *Haga*, all but three went for the *Haga* because of a communications mistake. Three of the pilots realised this error and diverted instead to the *Akagi*. As for Leslie, he led his dive bombers in an attack on the *Soryu*. All three carriers suffered heavy damage from the US Navy dive bombers. Nagumo was forced to transfer his flag from the burning *Akagi* to the cruiser *Nagara*.

The Japanese were thirsting for revenge, and it fell to the aircraft crews of the *Hiryu* to inflict damage on the Americans. The *Hiryu* began launching its aircraft at approximately 11am. Fletcher ordered an additional 15 Grumman F4F Wildcats to launch to join the 12 fighters already conducting combat air patrol. Because the *Yorktown*'s radar picked up the attackers as they were inbound, the flight deck crew was able to send parked aircraft to the hangar deck. Although the *Yorktown*'s anti-aircraft guns and fighters downed 13 Vals, the Japanese dive-bomber attack was a success. Three bombs exploded on the flight deck of the *Yorktown*. The heavy damage compelled Fletcher to transfer his flag to the cruiser *Astoria*. Damage control crews succeeded in putting out the fires after which the flight deck crew was able to recover Leslie's dive bombers as they returned from their mission. In addition, they refuelled the Wildcats in anticipation of a second strike.

When Rear Admiral Tamon Yamaguchi on the *Hiryu* learned from search aircraft after 1pm that three American carriers had attacked the carrier group, he ordered another strike. The *Hiryu* began launching torpedo bombers for a second strike against the American carriers at 1:30pm. Since the damage control crews on the *Yorktown* had put out the fires started by the first strike, the Japanese Kates attacking

the *Yorktown* mistakenly believed they were attacking a second carrier.

### Flaming Flattops

An American search plane finally located the *Hiryu* at mid-afternoon, and less than an hour afterwards, 30 dive bombers took off from the *Hornet* and *Enterprise* against Nagumo's last functioning carrier. They destroyed it with four bombs.

As the sun set over the flaming flattops that were once the pride of Japan, the horror of what occurred spread through the Imperial Japanese Navy. Massive explosions ripped through the *Kaga* and *Soryu*, sinking within minutes of each other. Both sides lost large numbers of aircraft. The Americans lost 179 land-based and carrier aircraft, while the Japanese lost all 261 of their carrier aircraft, as well as 71 fighters that the carriers were ferrying for service on Midway once it was captured. Though the Japanese had other carriers, the four lost at Midway were the pride of the navy, and their absence was felt.

Four Japanese destroyers fired torpedoes at the *Akagi* at dawn on 5 June to sink her, and the *Hiryu* went down a few hours later. Yamamoto cancelled Operation MI that same afternoon. Nimitz had outfought Yamamoto; in so doing, he torpedoed Yamamoto's dream of destroying the US Pacific Fleet and of forcing the Americans to sue for peace.

### FURTHER READING

★ GROOM, WINSTON. 1942: THE YEAR THAT TRIED MEN'S SOULS (NEW YORK: ATLANTIC MONTHLY PRESS, 2005)

★ HEALY, MARK. MIDWAY 1942: TURNING POINT IN THE PACIFIC (BOTLEY, OXFORD: OSPREY, 2004)

★ PRANGE, GORDON. MIRACLE AT MIDWAY (NEW YORK: MCGRAW HILL, 1982)

Images: Alamy



# The War And Peace Revival

The Greatest Celebration Of military Vehicles  
And Vintage Lifestyle In The World!

25<sup>th</sup> - 29<sup>th</sup>  
July 2017

**HOP FARM  
SHOWGROUND**

**KIDS GO FREE!**

**Win an Enigma  
Machine replica  
worth over £5,000!**

Be in with the chance of winning this  
amazing prize by buying your advance  
tickets online today!

**Win!**



Step back in time with over 50 living history  
groups displaying scenes from throughout history.

Over 2500 military vehicles including tanks,  
Jeeps, half tracks & so much more!

Watch explosive arena action during the action  
packed battle re-enactments!

**All held on over 150 acres of land!**

**warandpeace revival.com**

Email: [info@warandpeace revival.com](mailto:info@warandpeace revival.com) | Call: 01258 858 448

## BOOK PUBLISHING

Authors invited to submit manuscripts  
all categories

**New Authors welcome**

A. H. STOCKWELL LTD, Dept. 1,  
Ilfracombe, Devon, EX34 8BA.

**Tel 01271 862557**  
**www.ahstockwell.co.uk**

**Publishers for over 100 Years**



400+  
Military  
Vehicles

**ASHDOWN WW2 CAMP**  
**17 & 18 JUNE 2017**

Cherished  
Vehicle  
Insurance  
Classic Military  
Vehicle Insurance

Organised by Ashdown, sponsored by Cherished Vehicle Insurance Services



- 40's Entertainment
- Arena Events
- Armoury
- Battle (Sun.)
- Militaria Stalls & Vintage Stalls
- Re-enactors
- Tanks
- Classic Cars
- Children's Fair
- Food & Bar

Adults £12 Children £5 Family £30 Concessions £8  
Call Amy 0789 9025091, email [al78@msn.com](mailto:al78@msn.com) or visit

**WWW.ASHDOWNCAMP.COM**

Ashdown Farm, Badsey, Nr. Evesham, Worcestershire, WR11 7EL  
Just 200yds off A46, AA signposted, gates open 10.00am daily





## Heroes of the Victoria Cross

# CHARLES HEAPHY

Having desperately fought off Maori warriors to save several wounded men, a militia officer becomes the first colonial soldier to receive the Victoria Cross

WORDS MARK SIMNER

**A**lthough born in London, Charles Heaphy would spend much of his adult life living and working in New Zealand. In 1867, he would be awarded the Victoria Cross for gallant actions committed three years earlier during the British invasion of Waikato, the largest and most significant campaign fought during the New Zealand Wars between 1845 and 1872. He would be the first soldier of a colonial army to become a recipient of the VC, although he had to personally fight a reluctant British government for the distinction.

Heaphy had worked as a draughtsman for the London and Birmingham Railway Company in 1835-36, after which, thanks to the sponsorship of a friend of the family, he attended the Royal Academy's school of painting, albeit intermittently, from 1837 for 18 months. However, it would be in 1839 that he joined the New Zealand Company – a British company established to carry out the systematic colonisation of the country – again working as a draughtsman. Although initially working for the company in London, he would soon arrive in the colony aboard the *Tory*, itself a convict ship. Thus began Heaphy's life in New Zealand at the age of 19 or 20.

In 1840-41, he would be employed in preliminary exploration work for establishing potential company settlements, but when he was sent with an expedition to the Chatham Islands he was wounded in the leg when he intervened in a skirmish between two warring Maori tribes. Recovered from his wounds, he briefly returned to Britain in 1842 in order to report on his findings – using pictures he had drawn in situ – on the progress of the company settlement at Nelson. His work

was subsequently published as a series of lithographs, and he also published a book entitled *Narrative Of A Residence In Various Parts Of New Zealand*.

By 1843, Heaphy would be back in New Zealand, where he attempted to turn his hand to farming, but in this he was unsuccessful. He next – at his company's request – conducted a number of exploratory journeys into the interior of the country, and in 1846 conducted a survey down the west coast. The following year, his work for the company continued, marking out Maori reserves at Massacre Bay, after which he took a position as a draughtsman in Auckland, this time working for the colonial government.

In 1852, he was appointed commissioner of the Coromandel goldfield, which he attempted to extend by seeking mining rights from the Maori people. Two years later he took up the position of district surveyor at Matakama, then worked as the provincial land surveyor for the province

of Auckland from 1858. Finally, in 1864, he was made chief surveyor for the New Zealand government. Heaphy, therefore, had a relatively successful career as regards to his civilian life. However, he also had military experience, having enlisted in the Auckland Regiment of Militia (also referred to as the Auckland Militia or Auckland Rifles Volunteers) in 1856 as a private.

Unlike in other colonies, military forces in New Zealand had traditionally been formed as a direct response to a specific threat. In 1846, the Royal New Zealand Fencibles – formed of army pensioners from Britain, who had 15 years' service but were under 48 years of age – became the first permanent military force in the colony. Subsequent military forces were formed under the Militia Act of 1845, which required all able-bodied men aged between 18 and 65 years to undergo part-time military training with their local unit. Service, however, was restricted to within 25 miles of their local police office. It is therefore likely that Heaphy joined his militia unit under this compulsion.

At this time, Maori forces had no set structure or organisation; rather they comprised of armed men from individual tribes (*iwi*) or clans (*hapu*). Leadership was usually provided by the eldest male of the leading family of the *iwi* or *hapu*. Unlike the colonial militias they fought, the Maoris had no hierarchical rank structure or formal training; the chief would lead his warriors into battle, and if killed or wounded his men would often give up the fight and retire from the field.

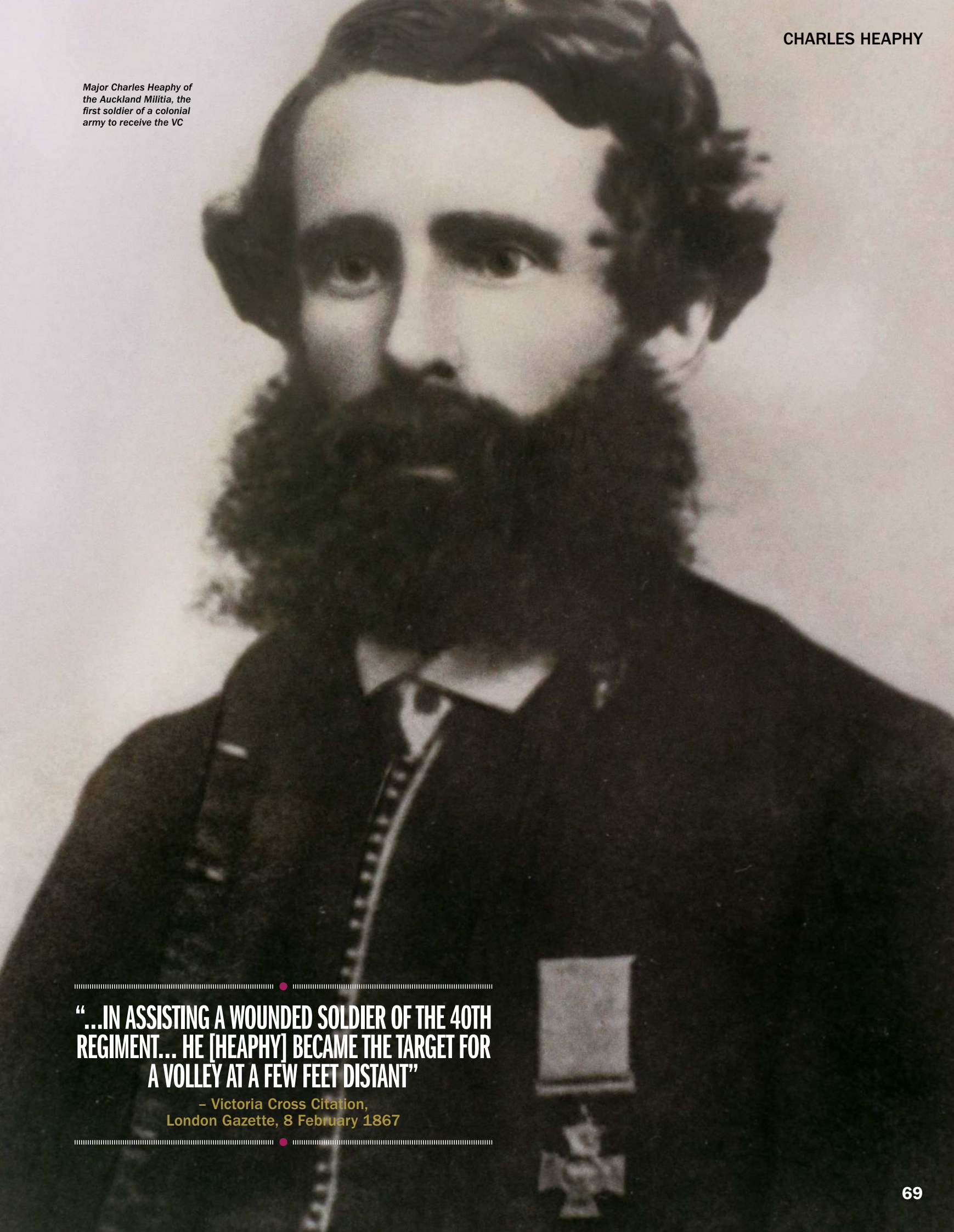
Maori warriors were also traditionally armed with spears and rocks, both of which were thrown at their enemy, but when close-quarter combat took place they would use clubs made of wood or whalebone. Following

**“FIVE BALLS PIERCED HIS CLOTHES AND CAP, AND HE WAS WOUNDED IN THREE PLACES. ALTHOUGH HURT, HE CONTINUED TO AID THE WOUNDED UNTIL THE END OF THE DAY”**

– Victoria Cross Citation,  
London Gazette, 8 February 1867



*Major Charles Heaphy of the Auckland Militia, the first soldier of a colonial army to receive the VC*

A black and white portrait of Major Charles Heaphy, a man with a full, dark beard and mustache, wearing a dark military uniform with a high collar and a sash. A Victoria Cross medal is pinned to his left breast.

..... ● .....

**“...IN ASSISTING A WOUNDED SOLDIER OF THE 40TH REGIMENT... HE [HEAPHY] BECAME THE TARGET FOR A VOLLEY AT A FEW FEET DISTANT”**

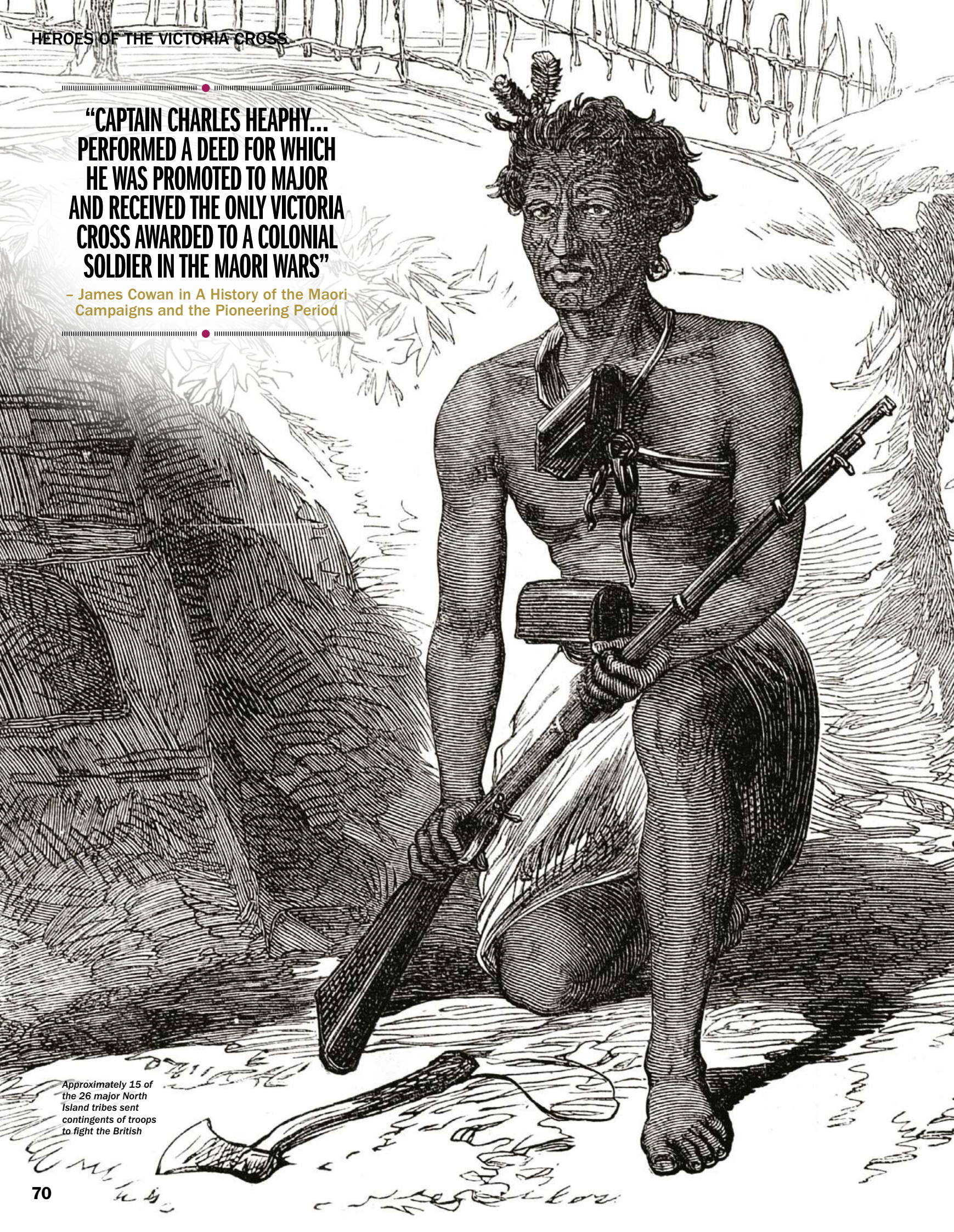
– Victoria Cross Citation,  
London Gazette, 8 February 1867

..... ● .....



**“CAPTAIN CHARLES HEAPHY...  
PERFORMED A DEED FOR WHICH  
HE WAS PROMOTED TO MAJOR  
AND RECEIVED THE ONLY VICTORIA  
CROSS AWARDED TO A COLONIAL  
SOLDIER IN THE MAORI WARS”**

– James Cowan in *A History of the Maori  
Campaigns and the Pioneering Period*



Approximately 15 of  
the 26 major North  
Island tribes sent  
contingents of troops  
to fight the British



their introduction by European traders, many warriors increasingly carried bladed weapons such as axes or swords, the former usually having been made to fell trees rather than for use in combat. However, by the time Heaphy would face Maori warriors in battle, many had acquired flintlock muskets or even deadly double-barrelled percussion shotguns.

From as early as 1845, there had been a number of periods of hostility between the British settlers in New Zealand and the indigenous Maori. However, it was the British invasion of Waikato that would prove to be the most drawn out and significant event. It would also be the campaign in which Heaphy earned his Victoria Cross.

This conflict was principally fought over the ownership of land, and in particular territory in the Waikato region. Sir George Grey, who had been appointed Governor of New Zealand for the second time in 1861, had commanded much respect from many Maori *iwi*. However, he encountered resistance from the Kingitanga Movement (also known as the King Movement) in Waikato. The Kingitanga were opposed to the building of a road towards their lands. In response to roving Waikato warriors, who caused the authorities much trouble, Grey authorised an expedition against the Maoris by issuing a virtual declaration of war, accusing them of being a threat to peaceful Europeans and disloyal to the queen.

Command of the British expedition fell to General Sir Duncan Cameron, who led his force across the Mangatawhiri River on 12 July 1863, which signalled the beginning of the Waikato campaign. Five days later, Cameron successfully stormed Koheroa and, on 20 November, fought an action at Rangiriri. Heaphy – who had been commissioned into the Auckland Militia as a lieutenant in 1863 and had rapidly risen to the rank of captain – witnessed the action develop and would later draw a sketch of what he saw. The outer works of the Maori position were quickly overrun by Cameron's troops, but following a high number of casualties sustained after three attempts to penetrate the main position, the general

ordered a halt to the attack. Nevertheless, the Maoris surrendered their position the next day.

The Waikato Maoris now withdrew to other fortified positions while Cameron pushed his forces on, facing little opposition as he went. However, the Maoris would make a number of hit-and-run style attacks on small or isolated groups of British troops. One such skirmish took place on 11 February 1864, when an attack was mounted on a detachment of the 40<sup>th</sup> Regiment of Foot on the Mangapiko River. The British soldiers were bathing in the river when some 100 Maoris ambushed them.

Heaphy witnessed the ambush, and in his capacity as commander of a detachment from the 50<sup>th</sup> Regiment of Foot, rushed to the assistance of the men of the 40<sup>th</sup>. Despite being outnumbered, the captain was able to drive off the attacking Maoris, who made off into the bush. However, as the British pursued their withdrawing enemy a soldier of the 40<sup>th</sup> Foot was wounded and fell into a hollow. Seeing the wounded man go down, Heaphy and three of his men rushed to his aid, but as they did so they came under heavy fire. The captain soon found himself wounded in three places, with a further five musket balls cutting holes through his clothing and cap. Of the three soldiers who accompanied Heaphy, one was also wounded while another was killed.

Despite his wounds, Heaphy, assisted by the only remaining unhurt soldier, kept up a continuous fire in a desperate attempt to fend off the Maori warriors now surrounding them. This the two men continued to do until finally relieved by other British soldiers who had fought their way through to the captain's side. Unfortunately for Heaphy, the two wounded soldiers who he fought so hard to save both subsequently died of their wounds. Total British casualties for the day amounted to six killed and seven wounded, while Maori losses stood at 35 killed and 30 wounded.

Eventually the fighting died down, but Heaphy refused to leave the field until the skirmish was over. For his exertions, the captain was promoted to major and mentioned in dispatches, and also subsequently

recommended for the Victoria Cross. The actual recommendation was made by Major-General Thomas Galloway, who commanded all colonial forces in Auckland. This recommendation was further backed by Grey himself, but because Heaphy was a militia officer the recommendation was turned down. The reason for this was due to the fact that only members of the British Army or Royal Navy were eligible for the medal at the time.

Nevertheless, Heaphy himself protested the fact that members of the colonial militias could not receive the award. With continued support from Cameron and Grey, the now retired major was finally able to persuade the British government that colonial troops should be made eligible for the Victoria Cross. Thus, in early 1867, the rules were changed and Heaphy was awarded his VC, the citation for which was printed in the *London Gazette* on 8 February of the same year. Heaphy was to become the first colonial soldier to receive the award, being presented with the medal in Auckland.

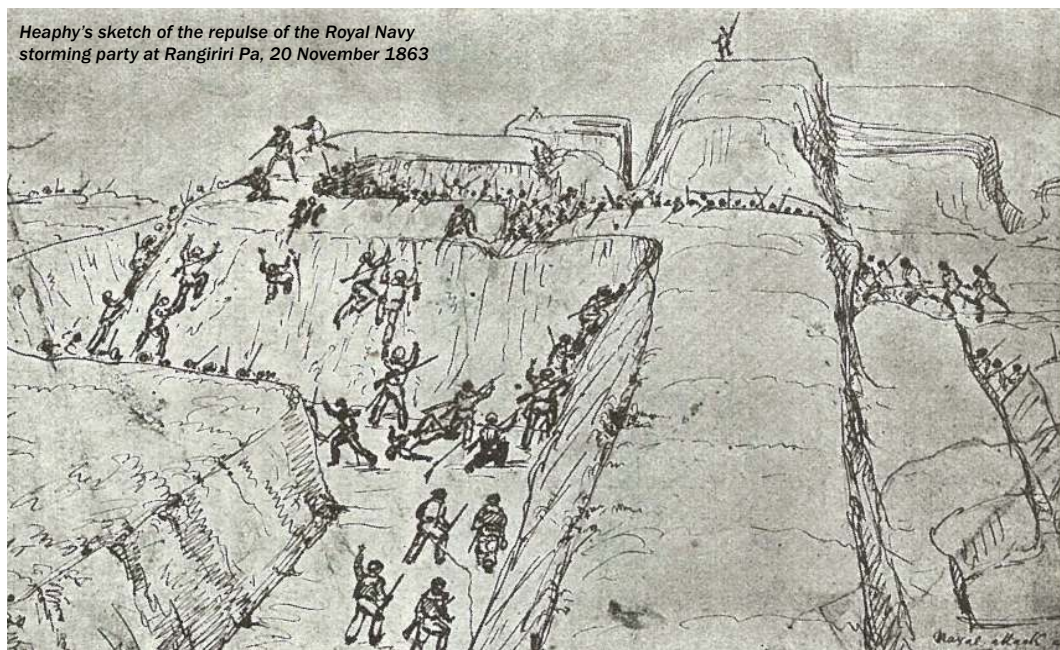
Military life for Heaphy had ended when the Waikato campaign came to its conclusion in April 1864, following the three-day Battle of Orakau. The British expedition had defeated the Kingitanga Movement and much of their land was subsequently seized by the New Zealand government. The former major now returned to his civilian life and work.

In 1866, Heaphy would be given the position of provincial surveyor and deputy waste lands commissioner. The following year, however, he would become a member of the New Zealand house of representatives until 1869, when he was appointed commissioner of native reserves. Further appointments within the New Zealand civil service would follow, but he would ultimately be forced to retire due to ill health – including the effects of his wounds – in June 1881. Sadly, he would not get to enjoy his retirement for long, as he would die in Brisbane, Australia on 3 August the same year.

Heaphy is buried at the Toowong cemetery in Brisbane, and his Victoria Cross is currently held by the Auckland War Memorial Museum in Auckland, New Zealand.



Period map of Waikato from 1866



Heaphy's sketch of the repulse of the Royal Navy storming party at Rangiriri Pa, 20 November 1863



BRIEFING

SOUTH SUDAN'S

# Brutal Birth

The world's newest nation emerged from five decades of separatist war only to be plagued by renewed ethnic violence that has killed thousands and threatens famine

WORDS TOM FARRELL

**T**he latest news from Africa's bloodiest conflict does not bode well for the future. Already the four year conflict, ostensibly between the two largest ethnic groups, the Dinka and Nuer, is creating famine conditions.

In February 2017, General Thomas Cirillo Swaka, a member of the Bari ethnic group, resigned as deputy chief of staff of South Sudan's Army. He has accused President Salva Kiir, a member of the Dinka group, of recruiting militias and engaging in ethnic cleansing. Now Cirillo plans to join the Nuer-dominated rebellion, and some estimates put the number of fighters in his new militia at 30,000, potentially a force for terrible destruction.

In theory, Africa's longest-running civil war ended in 2005 with the signing of the Comprehensive Peace Agreement (CPA), which allowed autonomy for the ten southernmost states of Sudan.

Bordered by six nations and rich in oil, the region is ethnically diverse; over 60 languages are spoken. Aside from the Dinka and Nuer, the region is inhabited by such groups as the Murle, Luo, Bari Shilluk and Azande.

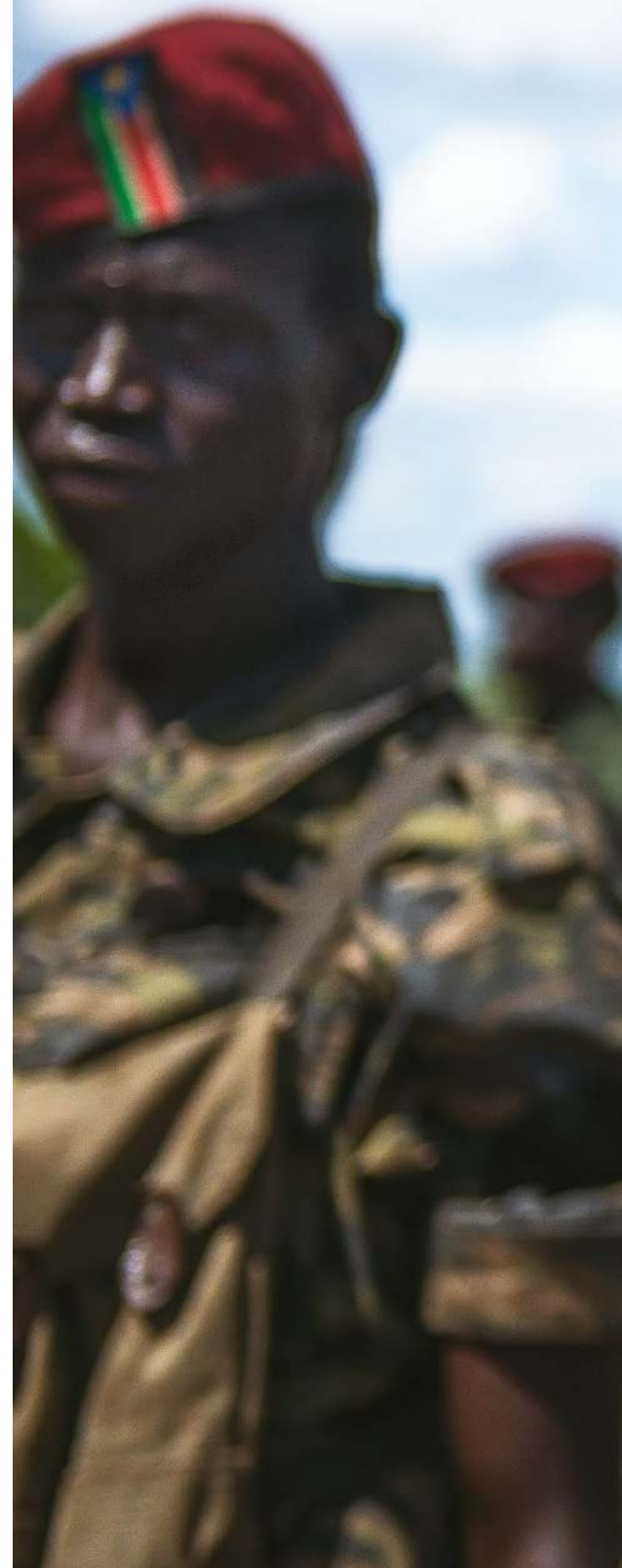
On 9 July 2011, after six years of autonomy, the world's youngest nation came into being

with street parties in every town and jubilation among its 11 million people. But border clashes with Sudan persisted along with internal ethnic clashes. In late 2013, Kiir fired his entire cabinet, accusing his former Nuer deputy Riek Nuer of fomenting a coup against him.

Violence spread out from the capital, Juba as the Dinka-dominated ruling Sudan People's Liberation Movement (SPLM) clashed with Riek's largely Nuer SPLM In Opposition (SPLM-IO) and its allied 'White Nuer' militia. Over 400,000 civilians were displaced in the first month of conflict alone. Kiir controversially called in Ugandan troops to assist in suppressing the uprising. Since 2011, approximately 12,500 troops and staff have been deployed as part of the United Nations in South Sudan (UNIMISS).

Although a peace deal was worked out in August 2015, and Riek temporarily rejoined the government as vice president, violence flared in Juba on the eve of the fifth anniversary of independence. Around 300 people, including two UNIMISS staff, were killed and 40,000 displaced. Riek once again fled the capital and resumed leading the SPLM-IO.

At the start of 2017, conservative estimates put the death toll at 100,000. One in three



## SUDAN'S VIOLENT HISTORY

1956

Sudan becomes independent of Britain. Deep divisions are evident between the Muslim north and the Christian and Animist south. Southern rebellion gets underway.

1969

Military officers led by Colonel Jafaar Mohammed Numeiri seize power in Khartoum. Initially espousing a socialist and Pan African ideology, the regime promises southern autonomy.



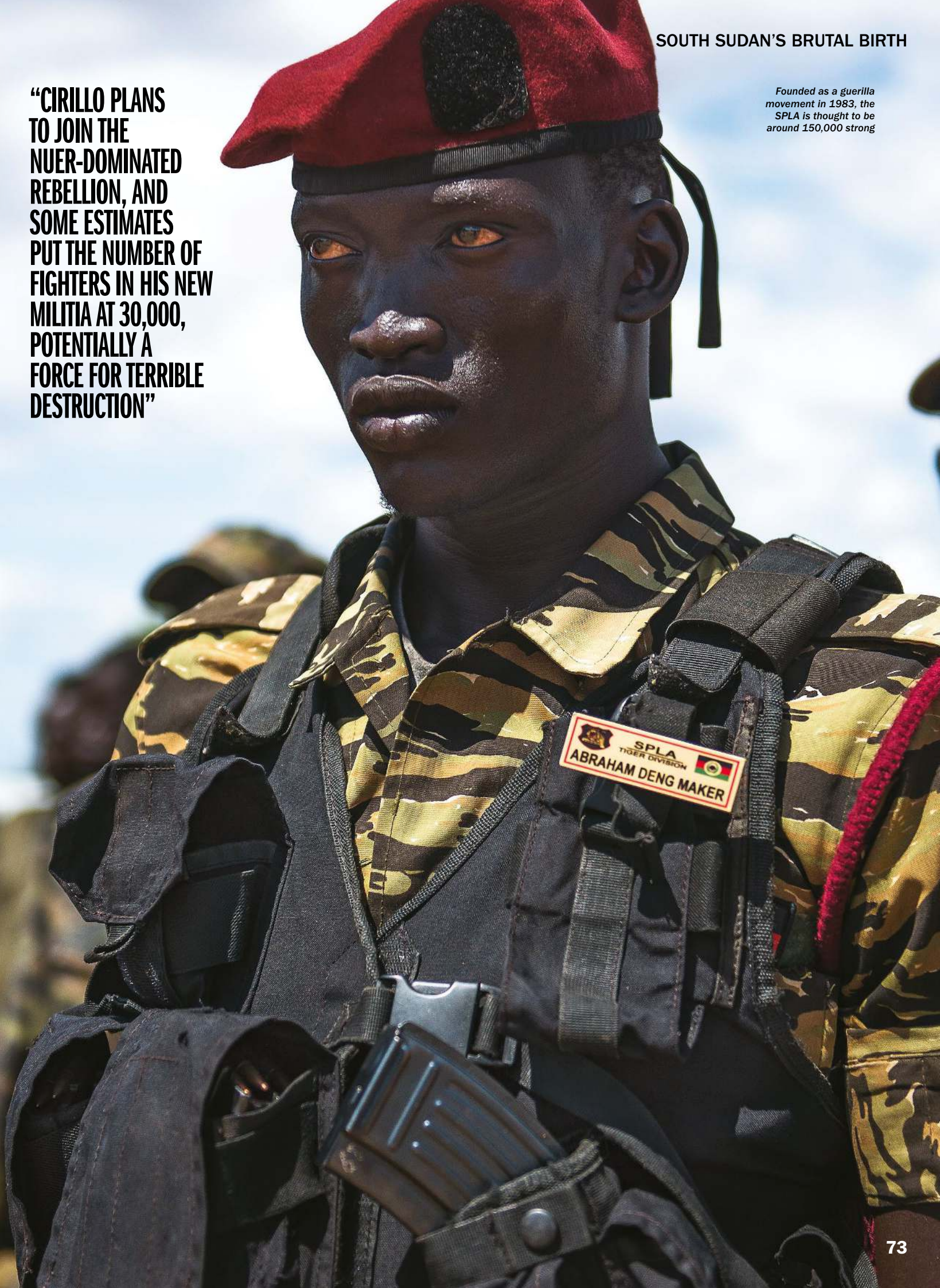
1972

A peace deal in Addis Ababa agrees to southern autonomy and ends the first phase of the war. Oil is later discovered in the region.



*Founded as a guerilla movement in 1983, the SPLA is thought to be around 150,000 strong*

**"CIRILLO PLANS TO JOIN THE NUER-DOMINATED REBELLION, AND SOME ESTIMATES PUT THE NUMBER OF FIGHTERS IN HIS NEW MILITIA AT 30,000, POTENTIALLY A FORCE FOR TERRIBLE DESTRUCTION"**





members of the population has been displaced and 1.5 million have fled to neighbouring countries, particularly Uganda; South Sudan has the world's third biggest refugee population after Syria and Afghanistan. In camps for the displaced, an estimated 70 per cent of women have been raped. With famine conditions now reported in some areas, this new African nation has had a truly nightmarish infancy marked by hatred and suffering.

### Long road to independence

An old local saying goes: 'Aktul al-abid bil abid' (kill the slave through the slave) and this illustrates how the seeds of the current conflict were planted in the long struggle for independence from the Islamic north. Under Anglo-Egyptian colonial rule, the Muslim north and the Christian and Animist south were ruled as two distinct entities. By 1947 they were unified, but the south has been badly neglected; even today, the new nation has very little infrastructure. Many towns and air strips become inaccessible in the rainy season. One in seven children dies before the age of seven.

Promises by the newly independent Sudan to create a federal system of government were never honoured. The first civil war broke out in 1955 and ended with the 1972 Addis Ababa Agreement. Fundamental to the peace was a promise to grant autonomy for the south. But such promises were shelved after oil was discovered near Bentui in the Upper Nile region in 1978. The American company Chevron eventually spent \$1 billion on exploration and two large oil fields were established, called Unity and Heglig respectively.

Around the same time, President Jafaar Numeiri sought to consolidate his support among northern Muslims by bringing two prominent Islamic politicians into government. The first was Umma Party leader Sadiq al-Mahdi, great-grandson of the famous Mahdi who had fought the British during the 19th century. The second was Hasan al-Turabi, leader of the Muslim Brotherhood and founder of the Islamist National Islamic Front (NIF).

In 1983, Numeiri declared an Islamic revolution, imposing curbs on western fashions and music. On one occasion, he publicly poured \$11 million worth of alcohol into the Nile.

A regional government in the south was dissolved and south Sudan split into three regions, effectively terminating the 1972 agreement. Mutinies now broke out in army garrisons in the southern towns of Bor and Pibor. Many southern troops deserted and regrouped across the eastern border in Ethiopia, where they formed the SPLM.

The SPLM was led by Colonel John Garang de Maboir, a Dinka officer with a doctorate in agricultural economics from Iowa State

University and military training at Fort Benning Georgia. But Garang sought not southern succession but the creation of a secular socialist regime for all of Sudan.

He found many willing recruits for his military wing, the Sudan People's Liberation Army (SPLA) and remarked that: "The marginal cost of rebellion in the south became very small, zero or negative; that is, it pays to rebel."

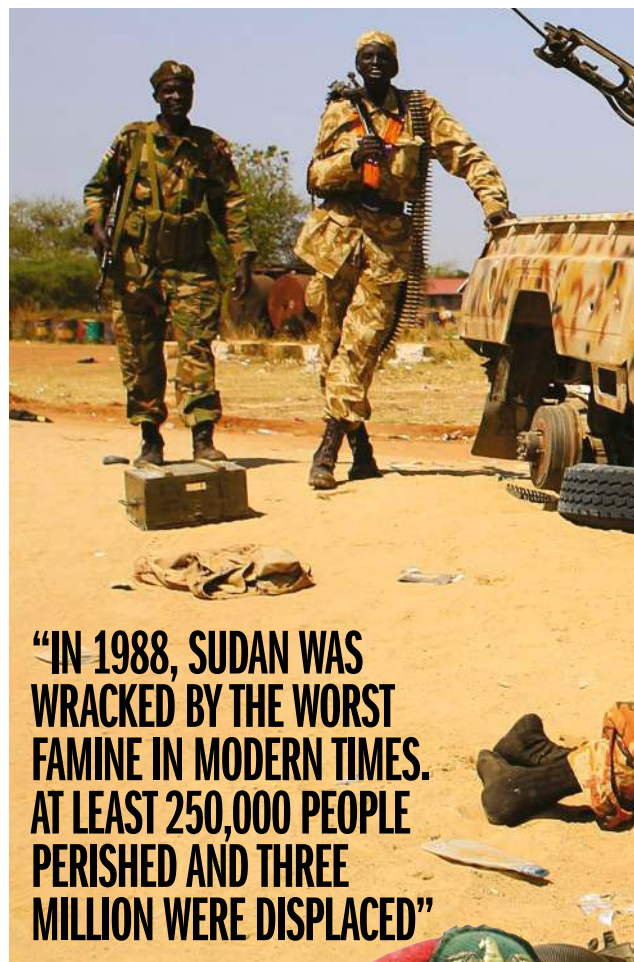
This was no glib remark. As with other African conflicts, foreign powers were quick to intervene. The Ethiopian Mengistu Haile Mariam and Libyan Muammar Gaddafi regimes backed the SPLM in revenge for Khartoum's sponsorship of separatist and opposition groups on their soil. Despite its grim reputation for human rights violations, Washington poured aid into Numeiri's regime to the tune of \$1.5 billion as a bulwark against the pro-Soviet Ethiopian junta and the reviled Gaddafi.

During the 1980s, the Sudanese regime attempted to boost agricultural production by investing heavily in mechanization. But the effort back-fired and the nation accumulated debts of \$12 billion. Drought struck in 1983-84, causing mass hunger. This hastened the overthrow of Numeiri in 1986, bringing to power Sadiq al-Mahdi as prime minister. As the head of a northern coalition, he was fully committed to the further 'Islamisation' of Sudan.

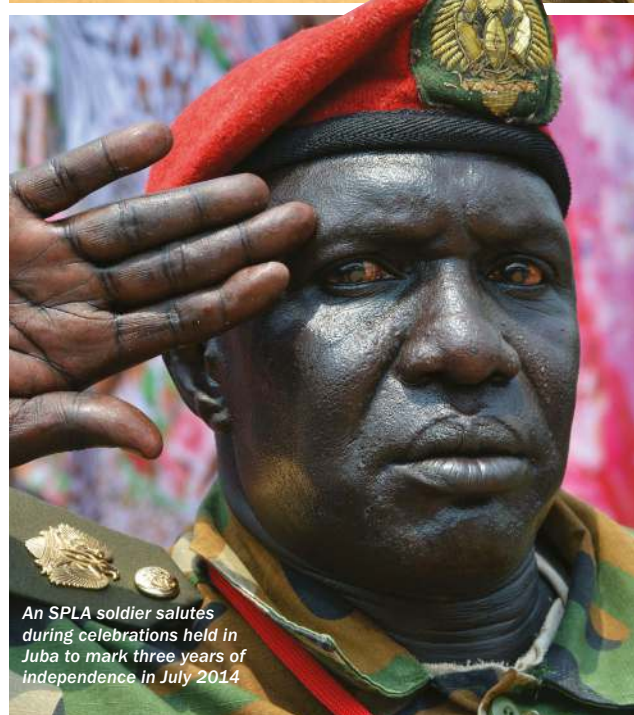
Not surprisingly, the SPLM refused to enter a ceasefire. Thus Sadiq's regime armed Baggara Arab militias from western Sudan. Known as murahalin, they were licensed to attack Dinka and Nuer areas. By this time, Chevron had ceased its activities at Unity and Heglig. The oil fields were largely in Dinka and Nuer areas and the murahalin committed ethnic cleansing in the territories around them.

The predominantly Dinka SPLM was opposed by rival factions that acted both independently and with Khartoum's support. Among the Nuer, some factions supported the SPLM and others opposed it. The consequence of such internecine warfare was entirely predictable. In 1988, Sudan was wracked by the worst famine seen in modern times. At least 250,000 people perished due to starvation and three million were displaced.

Food was used as a weapon of war. Both sides attacked cattle herds, destroyed crops and blocked convoys of foreign aid. When aid did get through to the south, it was frequently commandeered by SPLA guerillas. Combined with the military aid they were already receiving, the SPLM soon controlled much of the southern countryside. With the army forced back into garrison towns, Sadiq was forced to negotiate with Garang. This was too much for Islamic hardliners in the north and the Army was discontent with his handling of the war: a coup took place on 30 June 1989 that put General Omar al-Bashir in power.



**"IN 1988, SUDAN WAS WRACKED BY THE WORST FAMINE IN MODERN TIMES. AT LEAST 250,000 PEOPLE PERISHED AND THREE MILLION WERE DISPLACED"**



An SPLA soldier salutes during celebrations held in Juba to mark three years of independence in July 2014

#### 1983

In response to growing Islamic influence, the South Sudan Liberation Movement (SPLM) renews the separatist struggle led by John Garang. Ethiopia and Libya provide military support.



#### 30 June 1989

With famine raging and the SPLM gaining ground in the south, General Omar al-Bashir stages a coup. Splits form within the SPLM over the movement's objectives.

#### August 1991

Nuer commander Riek Machar and others attempt to seize control of the SPLM. Thousands of ethnic Dinka are slaughtered by Riek's brutal forces in Bor that November.



#### July 2002

Under the terms of the Machakos Protocol signed in Keyna, the South is granted the right to self-determination. Riek Machar rejoins the SPLM.

#### January 2005

The Comprehensive Peace Agreement (CPA) is signed, which allows for a six year period of autonomy ahead of a ballot on full independence. Disputes over the oil-rich border areas ensue.





The body of a dead rebel killed by South Sudanese soldiers lies next to a wrecked military vehicle near Bor Airport



South Sudan has one of the most heavily armed populations on Earth, with weapons flooding in from around the world

## Enter Riek Machar

The SPLM-IO leader, Riek Machar has described himself as “a political animal” whose formative years witnessed the “betrayal” of the South after the failed peace of 1972. He was born in 1952, the 26th son of a village headman in Ler, Unity State in the Upper Nile region. Attending college in the UK in the 1980s, he married his first wife Angelina, now a prominent politician.

By 1984 he had relocated to Ethiopia to be trained by John Garang. But he was leery of Garang’s ideological project, which essentially involved emulating the Marxism of his Ethiopian patron, Colonel Mengistu. In August 1991, Machar and two other SPLA commanders, Lam Akol and Gordon Kong, attempted to seize control of the movement. Known as the SPLA-Nasir faction, after their main stronghold, the split turned Dinka-Nuer tensions into outright war. Weeks later, Machar’s forces slaughtered over 2,000 Dinka in the town of Bor and displaced 100,000 more. Once again warfare and famine wiped out thousands.

By 1997 Machar had broken away from the SPLM altogether and reached an accommodation with Khartoum, forming his own independent militia. There were hints of a share in oil revenues should a lasting peace be realized in the South.

Meanwhile, Sudan’s neighbours were becoming alarmed by Bashir’s vision of international Jihad. Since Uganda acted as a conduit for most of the arms to Garang’s forces, Bashir’s regime funnelled money to the odious Lord’s Resistance Army led by Joseph Kony. This militia kidnapped and brutalised children, forcing them to participate in further attacks throughout rural Uganda.

After the 9/11 attacks, Bashir found himself under even more pressure from the Bush administration to curb Islamic radicalism. Sudan had been a haven for the Osama bin-Laden in the early 1990s before his departure for Taliban-ruled Afghanistan.

The same month as the attacks, Bush appointed the former Missouri Senator John Danforth as his special envoy in Sudan. The peace process was criticised at the time as focusing too much on the NIF-dominated government and the SPLM and excluding other factions. But by 2002, the year a protocol was signed in Machakos, southern Kenya, 2 million South Sudanese were dead and 4 million displaced. The Machakos Protocol allowed for a ceasefire and a ballot on independence.

Thus, in January 2005 the CPA was signed and a six year period of autonomy commenced. It ended with scenes of national exhilaration in July 2011 after 98 per cent of the electorate voted to secede. But the joy was tempered by the loss of Garang, killed in 2005 when the Ugandan Mi-172 helicopter returning him

### August 2005

SPLM leader John Garang, recently sworn in as first vice president, dies in a helicopter crash while returning from Uganda.

### March 2008

Arab militias from Sudan and the SPLA clash over the oil-rich Abyei region, an area disputed since the signing of the CPA.



### 9 July 2011

South Sudan becomes the world’s youngest nation after 98 per cent of the population vote for independence. Salva Kiir Mayardit is elected president.



### 6 May 2012

A peace conference convenes in Bor following several years of intermittent clashes between the Murle, Lou-Nuer and Dinka groups.

### July 2013

President Kiir dismisses the cabinet, having stripped Riek of powers as his deputy. Key SPLM party structures are dissolved in November.

### 15 December 2013

Clashes erupt in the capital Juba between Dinka and Nuer fighters. Kiir accuses Riek and others of attempting a coup.



from a meeting with his long-time ally Ugandan President Yoweri Museveni, crashed near the Kenyan border.

### Troubled independence

Like many other resource-rich nations, the discovery of oil has almost seemed more of a curse than a blessing. In the late 1990s, the Khartoum government arranged for the setting up of a new oil consortium called the Greater Nile Petroleum Operating Company. In defiance of southern objectives it did not set up a new refinery on Southern soil but built a 1,540-kilometre pipeline to a specially constructed Red Sea marine port. Since independence, South Sudan has accused Sudan of charging exorbitant transport costs for use of the pipeline. The fighting has caused oil production to decline by one-third since 2013.

Moreover, under the terms of the CPA, there would supposedly be a referendum on secession for two disputed areas still held by Sudan: the provinces of South Kordofan and Blue Nile along with the oil-rich Abyei regions. But the votes have been repeatedly postponed and clashes between the two armies have taken place in Abyei.

To make matters worse, the period leading up to the outbreak of the civil war was characterised by endemic corruption by Kiir's regime. An independent report in 2012 estimated that at least \$4 billion in government funds had simply disappeared.

The SPLA military hierarchy continued to dominate government. South Sudan's political culture was weakened by the lack of an effective opposition and a constitution that was unclear about the distribution of power among government departments.

And so it was that in December 2013 a political struggle within the movement degenerated into outright warfare.

### Ethnic clashes and a failed peace

On 16 December 2013, President Kiir addressed the nation on television. Significantly, he had swapped his trademark suit and cowboy hat for military fatigues. He announced that a coup led by Riek Machar had been foiled and that the plotters had also included John Garang's widow, Rebecca Nyandeng de Maboir. The initial rebellion had begun four days earlier when gunmen clashed with the Presidential Guard in Juba. Kiir's generals then ordered the 'Tiger' battalion to disarm, but once this happened weapons stores were raided by Dinka soldiers. The SPLA split along ethnic lines and Nuer soldiers occupied the capital's military headquarters before being dislodged.

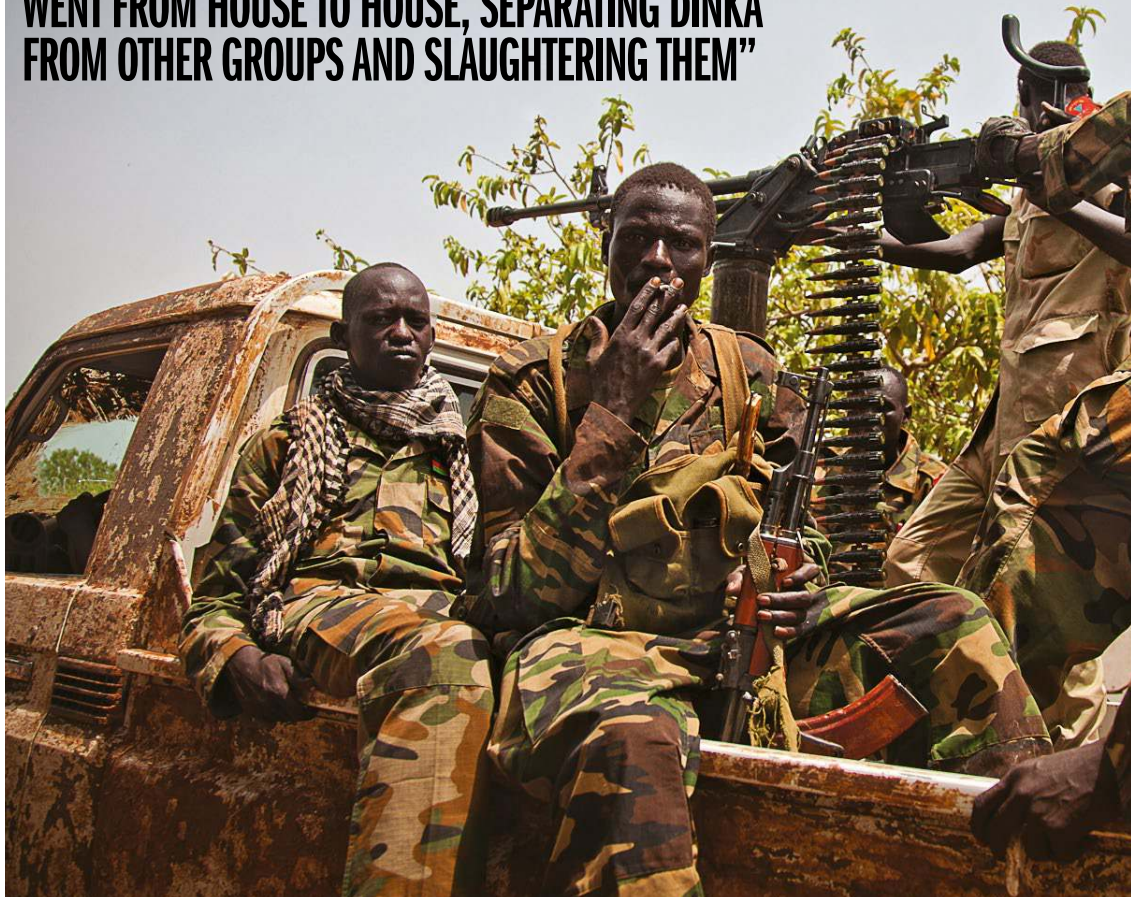
Fighting raged around Juba throughout December and 13,000 civilians took refuge in two UNMISS compounds there. Kiir declared a



Along with weapons built in Sudan, arms have been imported from Israel, China, and South Africa among other states



**"IN APRIL, THE SPLM-IO CAPTURED BENTIU AND WENT FROM HOUSE TO HOUSE, SEPARATING DINKA FROM OTHER GROUPS AND SLAUGHTERING THEM"**



#### January 2014

A ceasefire is signed but it is repeatedly broken over the next few weeks. Hundreds of thousands of people are displaced. Fighting spreads outside of Juba.

#### 15 April 2014

Nuer forces massacre hundreds of civilians in Bentiu after capturing the town. Riek Machar denies the SPLM-IO were responsible.

#### August 2014

Peace talks begin in Ethiopia but drag on for weeks over the conditions for a transitional government of national unity.

#### 16 May 2015

Assisted by the Shilluk warlord Johnson Olony, the SPLM-IO capture the second largest city, Malakal, and destroy most of its infrastructure.

#### April 2016

Riek Machar returns to Juba following a peace deal and is sworn in as vice president. By July, amid further violence, he is again sacked.

#### November 2016

The UN Secretary General sacks the Kenyan commander of the United Nations Mission in South Sudan (UNMISS) over the failure to protect civilians during the Juba clashes.

#### December 2016

A UN commission of human rights concludes that ethnic cleansing is occurring throughout South Sudan, although the government vehemently denies this.





Bearing tribal markings, a South Sudanese riot policeman watches over the 2011 independence celebrations



SPLA soldiers occupied Sudan's main oil field at Heglig for ten days in April 2012, nearly triggering a wider conflict

state of emergency in Jonglei and Unity State, where the SPLM-IO held the capitals. By January, the town of Bor had changed hands three times between the government and rebels.

By now three V-22 Osprey aircraft were airlifting US nationals from Bor. Fighting erupted in Malakal and Bentiu in January 2014 as the first attempt at a ceasefire was negotiated with the help of an eight-nation African trade bloc known as the Intergovernmental Authority on Development (IGAD).

In April, the SPLM-IO captured Bentiu and went from house to house, separating Dinka from other groups before mercilessly slaughtering them. They also killed civilians found sheltering in a hospital, mosque and Catholic church.

The horrendous brutality of the SPLM-IO prompted two commanders, Gabriel Tang and Peter Gadet, to realign with Kiir after August 2015, although Tang was killed in an ambush in early 2017. Another militia, the South Sudan Democratic Movement, drawn from the Murle group, also rose in rebellion although its leader, David Yau Yau, who later reconciled with Kiir in return for Murle autonomy in Pibor State. However, a splinter group known as the 'Cobra' faction has allied itself with Riek Machar since September 2016.

In August 2015, again with IGAD mediation, a peace deal was worked out: Uganda agreed to withdraw its troops and Riek Machar was offered the post of vice president. But over the next few months, Kiir appointed staunch loyalists to his cabinet. His plan to increase the number of states from ten to 28 caused tensions with the Shilluk and Azande groups.

By July 2016 violence returned to Juba, and two months later Machar again called

for the SPLM-IO to take up arms against Kiir. Throughout 2016-17 fighting has spread through the Equatoria and Greater Upper Nile regions. In addition to the original rebellion, there is now increasing violence within the Nuer community between those loyal to Riek Machar and those supporting his replacement as vice president, Tabang Deng Gai, also a Nuer.

## Famine

Already afflicted by two years of drought, famine conditions in Unity State were reported by the UN in February 2017. UN officials have also accused Kiir's regime of blocking attempts to deliver food aid, a charge the President denies. In any case, attempting to mediate peace or conduct a humanitarian operation has been difficult and dangerous.

A possible way forward could be the renegotiation of the 2005 CPA, this time worked out to be more inclusive and far-sighted. The removal of the two antagonists, Riek Machar and Salva Kiir, also seems imperative. The former is now in exile in South Africa, and although there is talk of disillusionment with his rule of the SPLM-IO, and with the rebels running out of weapons, there are enough ethnic opportunists like Carillo to reignite the violence. Salva Kiir, meanwhile, has postponed a 2015 election for at least three years.

When South Sudan became independent in 2011, amid just optimism and joy, the new nation adopted *South Sudan Oye* as its national anthem. Contained are the lines: South Sudan/The land of great abundance/Uphold us united in peace and harmony.

While there is no doubting the country's potential abundance, peace and harmony remain a long way off.

# DANGEROUS MISSION



SINCE DECEMBER 2013 AT LEAST

**79** AID WORKERS HAVE BEEN KILLED BY REBELS OR GOVERNMENT FORCES



**2**

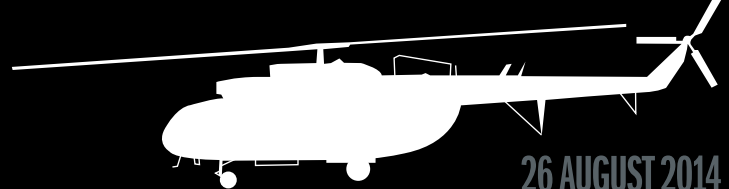
CHINESE UN PEACEKEEPERS WERE KILLED IN A ROCKET ATTACK IN JULY 2016 IN JUBA



JULY 2016

**5**

INTERNATIONAL AID WORKERS GANG RAPED WHEN DOZENS OF SPLA SOLDIERS ENTERED THE TERRAIN HOTEL IN JUBA



26 AUGUST 2014

**3** RUSSIANS KILLED WHEN REBELS SHOT DOWN A MI-8 HELICOPTER

**20 February 2017**

The United Nations declares famine conditions are afflicting Unity State and spreading to other areas. Up to 5.5 million people, half of the population, may experience food shortages within six months.







# SYRIA

## A CONFLICT EXPLORED

To mark the centenary of its foundation, IWM London explores and explains the tragedy of the Syrian Civil War

"IWM IS MARKING ITS CENTENARY BY EXPLORING EVOLVING GLOBAL ISSUES, PARTICULARLY THE DEVASTATING CONFLICT IN SYRIA, AS PART OF ITS 'CONFLICT NOW' STRAND OF EXHIBITIONS AND EVENTS"



The Imperial War Museums (IWM) were established in 1917 to reflect and record WWI, which at that time was an ongoing conflict. 100 years later IWM is marking its centenary by exploring evolving global issues, particularly the devastating conflict in Syria, as part of its *Conflict Now* strand of exhibitions and events.

*Conflict Now* features the opinions of individuals who have seen, experienced and worked in areas of conflict, which include artists, photographers, refugees, war correspondents and citizen journalists. Running from 27 April-3 September 2017 at IWM London, *Syria: A Conflict Explored* will feature two exhibitions called *Syria: Story Of A Conflict* and *Sergey Ponomarev: A Lens On Syria*.

The Syrian Civil War, which began in 2011 has now lasted longer than WWII, killed almost half a million people and forced nearly 11 million – half the pre-war population – to flee their homes. This is not just a domestic tragedy but also a severe global problem. Syria has been turned into a battleground for wider rivalries such as non-state militants like ISIS or great powers fighting for geopolitical supremacy like Russia and the US. The war has also created a refugee crisis that has enveloped neighbouring countries and Europe.

Gill Webber, executive director of content and programmes, IWM explains the purpose of the exhibitions. "The situation in Syria is complex, live and evolving and we know that



Above: Located in Lambeth, south London, the Imperial War Museum aims "to provide for, and encourage, the study and understanding of the history of modern war and 'wartime experience'".

viewpoints may change in two years, two months, two days or two hours. We want to help our visitors cut through the complexity and enable a deeper understanding of the causes, course and consequences of what is happening in Syria today. *Syria: A Conflict Explored* reflects a multitude of perspectives and positions and also questions and challenges the information we have available right here and right now."

Abu Husham Karim (right), a 70-year-old mechanic, and his family use a local taxi to salvage possessions from their ruined apartment in the Khalidiya district of Homs, 15 June 2014. Khalidiya, an Opposition stronghold in the north of the city, was besieged and heavily shelled for two years by Government forces





The exhibition is divided into three sections and seeks to provide an objective introduction to Syria's complicated civil war. It also endeavours to explain how a country that was known for its relative stability has been shattered by war

# INSIDE THE EXHIBITION

**THIS INTIMATE EXHIBITION EXPLORES THE ORIGINS, ESCALATIONS AND IMPACT OF THE SYRIAN CONFLICT AND WILL RUN BETWEEN 27 APRIL-3 SEPTEMBER 2017. CO-CURATOR DR CHRISTOPHER PHILIPS DISCUSSES HOW 'STORY OF A CONFLICT' AIMS TO PROVIDE VISITORS WITH A BROAD INTRODUCTION TO A COMPLEX CIVIL WAR**

## WHAT WAS THE IDEA FOR CREATING AN EXHIBITION BASED ON THE STORY OF THE SYRIAN CONFLICT?

The idea of the exhibition was to complement the series of fantastic photographs that the IWM have by Sergey Ponomarev. The curators at the IWM felt that while the pictures are fantastic, it drops the public into the deep end of the conflict without having much background knowledge. So the broad idea behind it was to give the public a relatively straightforward introduction to the conflict.

The way the media reports the Syrian conflict is in a somewhat simplified manner. They tend to reduce it to stereotypes, but what I want to show is that it's an incredibly complex civil war. It's both a civil war with domestic actors who have their own legitimate concerns on each side but also a regional and international proxy war where different external players are using the conflict to fight out their wider struggles. We really want the public to come

*Dr Christopher Phillips is the senior lecturer in International Relations of the Middle East at Queen Mary University of London*

away with a sense of that level of complexity, that they won't reduce the conflict to a simplified explanation. While they might not understand every component, the exhibition will allow them to have the tools to explore and learn more.

## CAN YOU DESCRIBE THE DIFFERENT SECTIONS OF THE EXHIBITION?

It's divided into three sections: objects, a film and personal stories. The centrepiece is the film, which is eight minutes long and uses graphics and archive footage to give a broad overview of the conflict. It gives an introduction about how it began, some historical background into how Assad came to power and how that helped generate

resentments that were then sparked by the Arab Spring in 2011. It then goes on to explain how the opposition was fragmented and the emergence of Islamic State and Kurdish forces etc. It then finally outlines external players.

The second section, which is actually the first one when you walk in, is the objects. This is a series of objects that we've gathered, many from Syria or related to the conflict, and they're selected to be symbolic of the war's different components.

One of my personal 'favourites' is a street sign from a neighbourhood in Aleppo that was on the frontline of the fighting. It has battle scars and shrapnel marks. I lived in Aleppo for a year and it was quite a wealthy area. It's symbolic of the fate of the city. Aleppo was Syria's wealthiest city and it has now been shattered.

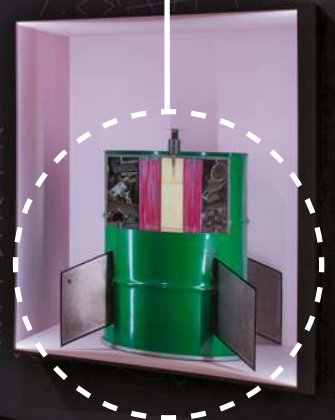
Finally, on the back wall we have a series of personal stories from Syrians themselves and this is very important to us. We wanted to get away from the high politics and actually give people the opportunity to hear different Syrian voices. The last thing we want to do is speak on behalf of Syrians. I hope that when people see this exhibition they will seek out Syrians where they live and get their side of the story and hear how they've been caught up in this conflict. We want to provide a platform and showing those personal stories is an important component of that.



**"I LIVED IN ALEPPO FOR A YEAR AND IT WAS QUITE A WEALTHY AREA. IT'S SYMBOLIC OF THE FATE OF THE CITY. ALEPPO WAS SYRIA'S WEALTHIEST CITY AND IT HAS NOW BEEN SHATTERED"**

The centrepiece of the exhibition is an eight-minute film that tells the story of the conflict in Syria. Produced by Liminal in collaboration with the IWM, the film outlines all aspects of the civil war, including the rise of Bashar al-Assad, the impact of the Arab Spring and diverse external players such as Russia, the US and Islamic State

Story of a Conflict features a selection of objects that symbolise the civil war. These include a lifejacket belonging to a fleeing refugee, international media reactions to the conflict and even barrel bombs. The latter (inset, right) are unguided improvised weapons that contain high explosives of shrapnel, oil and chemicals





## IS THE CONFLICT REMINISCENT OF COLD WAR-ERA PROXY WARS?

It certainly has echoes but things are different. It's important to emphasise that there is now an asymmetrical, geopolitical contest between the United States and Russia. During the Cold War, there was a degree of symmetry and balance, and while historians now know that the Soviet Union wasn't as powerful as it was perceived at the time, it was then seen as comparable in power to the US. Those proxy wars and showdowns in Vietnam, Afghanistan, and Cuba etc were seen as part of a wider contest for global supremacy.

That is not the case in Syria – it is widely recognised that Russia is not comparable in power to the US. What is unique about Syria is that it is one of the few states that still fall into Russia's orbit of interest. If you look at the post-Cold War Middle East, most of the states fell in the orbit of the US. Only Libya, Syria and Iran fell outside those areas, and only Syria had a close relationship with Russia. Iran was more independent after their revolution and Gaddafi's Libya was a pariah. Russia's position in Syria is not a competition for regional hegemony. Rather, it is more of a defensive move to shore up its one remaining ally in the region.

Ironically, the United States looks weak for not acting in Syria and Russia looks strong for doing the reverse. Vladimir Putin has tried to leverage Russian involvement in Syria to make

a claim to being more active in the Middle East, but a lot of people are exaggerating the extent to which Russia is challenging the US as an equal, especially within Syria. Much of it is due to Syria's unique position to Russian strategic importance.

## IN WHAT WAY IS THE UN SECURITY COUNCIL DIVIDED OVER THE FUTURE OF SYRIA AND WHAT ARE THE GEOPOLITICAL IMPLICATIONS?

It's interesting, because the Security Council is actually behaving as it was initially designed to at the end of WWII. It was this idea of four or five 'policemen' and veto members would get a say on what happened within their 'spheres of influence'. During the 1990s and 2000s, that idea slipped and it ended up being the hegemony of the USA and its allies in the region. However, Russia and China are becoming bolder now and are willing to veto in areas they feel are their spheres of influence. Syria has been one of those areas where the US, France and Britain have simply been unable to get through what they wanted. It's not unlike what happened in Iraq in 2003, when UN intervention was prevented by France and Russia.

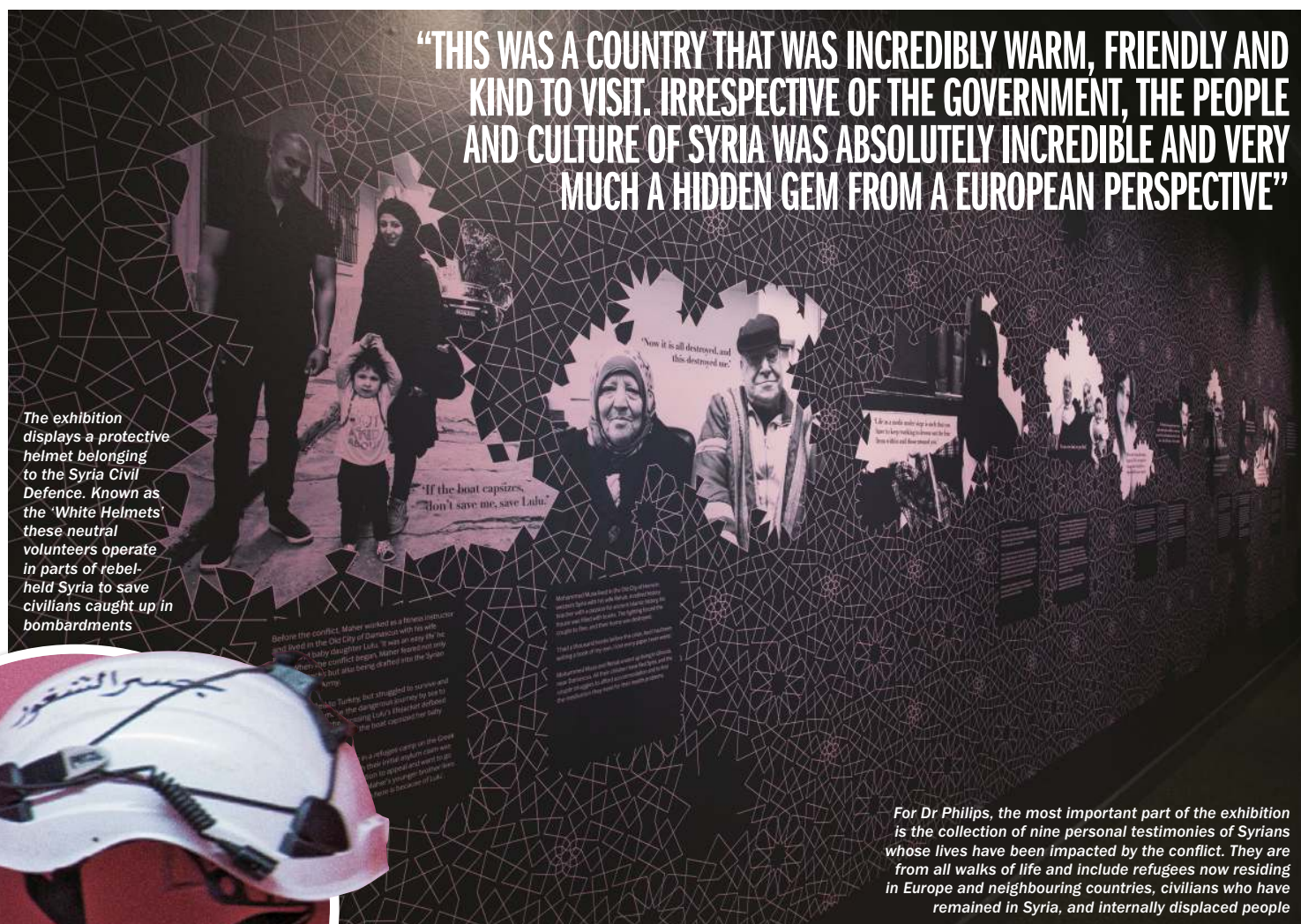
In many ways it's the structural reality of the UN Security Council and by design it's meant to do that. It's just that people have not been used to it doing that and that's why some think that the UN is not being effective. Russia (and China) have simply drawn a line in the sand and said, "We will

not permit anything to go through the Security Council that risks endorsing or legalising action against our ally Bashar al-Assad." That's the line they've stuck to since 2011.

## WHAT DO YOU THINK IS THE MOST IMPORTANT PART OF THE EXHIBITION?

The most important aspects are the personal stories because they so often get lost. We're trying to help educate people so that they get a broader understanding of the conflict away from these stereotypes. These are real people, they aren't statistics. Syria was a highly developed country and incredibly well educated: one in four people of university age went to university. It was a very advanced society in that sense and has been completely shattered by this conflict. Many people now just associate Syria with refugees, poverty, conflict and desperation and it's important for them to hear the real voices and to realise that this isn't the case. I feel that is the most important component of the exhibition.

This was a country that was incredibly warm, friendly and kind to visit. Irrespective of the government, the people and culture of Syria was absolutely incredible and very much a hidden gem from a European perspective. It is now reduced to this warzone and even areas that haven't seen any fighting have been affected. Syria has been badly decimated and as someone who knows and cares for it, it is heartbreaking to see.



For Dr Philips, the most important part of the exhibition is the collection of nine personal testimonies of Syrians whose lives have been impacted by the conflict. They are from all walks of life and include refugees now residing in Europe and neighbouring countries, civilians who have remained in Syria, and internally displaced people



An election campaign poster for President Bashar al-Assad displayed on a ruined shopping mall in the Khalidiya District of Homs, shortly after Government forces regained control of the area, 15 June 2014. The mall had been built just before the civil war broke out and has never opened for business

# A LENS ON SYRIA

Sergey Ponomarev is a Russian documentary photographer who has won many international awards for his work on the European refugee crisis, including the Pulitzer Prize (2016), World Press Photo Award (2017) and the Robert Capa Gold Medal Award (2017). His photographs, used with

minimal equipment, prioritise the consequences of conflict and *A Lens On Syria* will feature more than 60 photographs, some of them on display for the first time. The exhibition is displayed across four rooms and is presented in two sections: *Assad's Syria* and *The Exodus*.



*Assad's Syria* focuses on the impact of the civil war within the war-torn country under the rule of President Bashar al-Assad



Homeless children play in the ruins of Homs after Opposition forces have left the area, 14 June 2014. During the siege, children were left to fend for themselves when their parents went missing or were caught on the wrong side of the newly established checkpoints

**"HIS PHOTOGRAPHS, USED WITH MINIMAL EQUIPMENT, PRIORITISE THE CONSEQUENCES OF CONFLICT"**

An inflatable dinghy, crowded with refugees and migrants, is pulled ashore on the island of Lesbos after sailing five miles across the Aegean Sea from Turkey, 27 July 2015. Half the pre-war population of Syria – almost 11 million people – have been forced from their homes. Many of them have become refugees in either Europe or neighbouring countries

Images: Imperial War Museum



IWM London tells the stories of those whose lives have been shaped by war through the depth, breadth and impact of galleries, displays and events. The museum has free admission and is open daily from 10am-6pm. For more information visit: [www.iwm.org.uk](http://www.iwm.org.uk)



# FEED YOUR MIND

www.howitworksdaily.com



## HOW IT WORKS

ON SALE NOW

100th issue celebration! - A 100 Wonders of the world around us

Available  
from all good  
newsagents and  
supermarkets

### SCIENCE UP CLOSE



### INSIDE GADGETS



### COOLEST TECH



### ILLUSTRATIONS



### AMAZING FACTS



## BUY YOUR ISSUE TODAY

Print edition available at [www.myfavouritemagazines.co.uk](http://www.myfavouritemagazines.co.uk)

Digital edition available at [www.greatdigitalmags.com](http://www.greatdigitalmags.com)

Available on the following platforms



facebook.com/howitworks



twitter.com/@howitworksmag



Operator's Handbook

# WESTLAND LYNX

WORDS MIKE HASKEW

The development of the Lynx began as a joint venture between the UK and France



Left: The Westland Lynx established several speed records and demonstrated its agility as the world's first truly aerobatic helicopter



The swift, versatile Westland Lynx helicopter has performed in multiple roles for the armed forces of many countries during the last 40 years

**D**uring the mid-1960s, the British military turned its attention to the Westland WG 13, a multipurpose civil and naval utility helicopter. Military observers believed the type might perform well as a replacement for the Westland Wasp and Scout helicopters then in service and possibly outperform an alternative, the American-built Bell UH-1 Iroquois. In 1967, Britain and France signed an agreement to develop helicopters, and French manufacturer Aérospatiale joined Westland with a 30 percent stake in the development of the widely successful design that became known as the Westland Lynx.

The first flight of the Lynx took place on March 21, 1971, and it was accepted for service with the British armed forces six years later. Both battlefield and naval variants were developed while the fast and agile type set several helicopter speed records, including a 1986 mark at 400.87 kilometres per hour, establishing the Fédération Aéronautique Internationale airspeed mark, which has stood for three decades. The Lynx is also considered the world's first aerobatic helicopter, capable of performing loops and other manoeuvres while flying with the Blue Eagles aerobatic team of the British Army and the Royal Navy's helicopter display team, the Black Cats.

More than 100 examples of the Lynx AH.Mk 1 entered service with the British Army and Royal Marines in 1977. These were upgraded at least twice, serving as the primary anti-tank air assets and in ground support roles for both services, eventually equipping at least 11 squadrons. The Lynx is capable of transporting up to ten fully equipped combat troops in its transport role as well. Until its retirement in the spring of 2017, it served as the Royal Navy's primary anti-ship and anti-submarine helicopter, also performing air-sea rescue and reconnaissance missions. In 1994, a total of 38 previous versions were upgraded to the standard Lynx HMA.Mk 8.

**“THE LYNX IS ALSO CONSIDERED THE WORLD’S FIRST AEROBATIC HELICOPTER, CAPABLE OF PERFORMING LOOPS AND OTHER MANOEUVRES”**

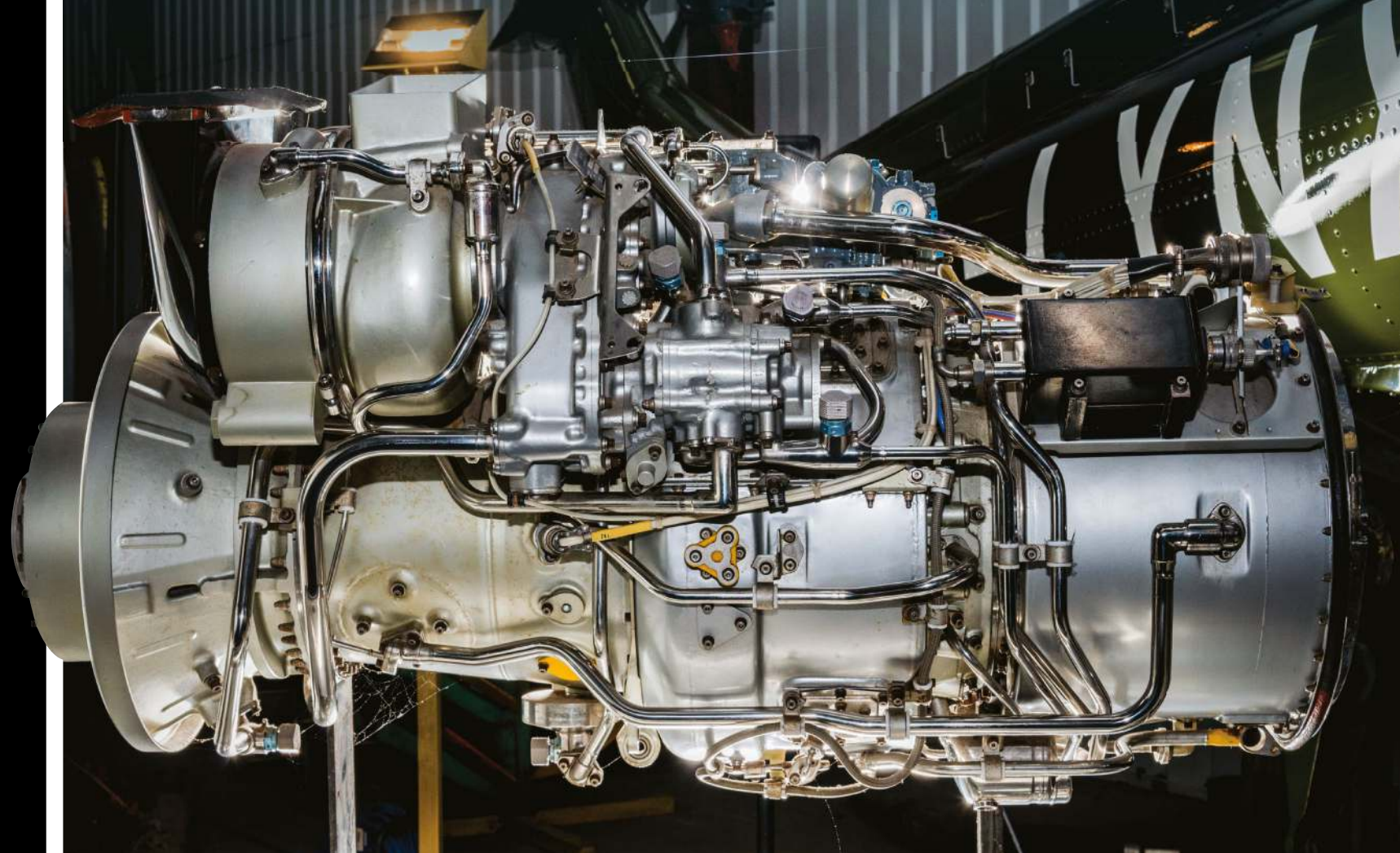
## WESTLAND LYNX SPECIFICATIONS

**COMMISSIONED:** 1977 **ORIGIN:** UK/FRANCE  
**LENGTH:** 15.16 METRES **RANGE:** 528 KILOMETRES  
**ENGINE:** 2 X ROLLS-ROYCE GEM TURBOSHAFT **CREW:** 2 OR 3  
**PRIMARY WEAPONS – NAVAL:** 2 X TORPEDOES OR 4 SEA SKUA  
 ANTI-SHIP MISSILES OR 2 X DEPTH CHARGES  
**PRIMARY WEAPONS – ATTACK:** 2 X 20MM CANNON, 2 X CRV7  
 ROCKET PODS, 8 X TOW ANTI-TANK MISSILES  
**SECONDARY WEAPONS:** 7.62MM GENERAL-PURPOSE MACHINE  
 GUNS; .50-CALIBRE BROWNING; AN/M3M MACHINE GUN



**"THE LYNX MOUNTS TWO GEMS, EACH PRODUCING 1,120 SHAFT HORSEPOWER WITH THEIR THREE-SHAFT CONFIGURATION"**

*The Rolls-Royce Gem 42 turbine engine was developed in the 1970s specifically for the Lynx*



## ENGINE

The Rolls-Royce Gem 42 turboshaft engine was developed specifically to power the Westland Lynx helicopter during the 1970s. De Havilland undertook the design, which transferred to Bristol Siddeley with the designation BS.360.

Rolls-Royce purchased Bristol Siddeley in 1966, and the name changed

to RS.360. The Lynx mounts two Gems, each producing 1,120 shaft horsepower with their three-shaft configuration, including a four-stage axial low-pressure compressor driven by a one-stage high-pressure turbine. Load power is delivered by the third shaft connected to a two-stage turbine. Since Rolls-Royce acquired Allison in 1995, the LHTEC T800 turboshaft engine has been utilised in upgraded Super Lynx helicopters.



*The Lynx has served as the backbone of the Royal Navy for decades*

*Painted in a grey camouflage scheme, this Westland Lynx reveals the mounting of a pair of Gem 42 turbine engines*





**"THE BRITISH ARMY ATTACK VARIANTS MOUNT A PAIR OF 20MM CANNON, TWO PODS CARRYING MULTIPLE CRV7 70MM ROCKETS FOR USE AGAINST GROUND TARGETS, AND UP TO EIGHT BGM-71 TOW ANTI-TANK GUIDED MISSILES"**



*A helicopter fires one of the crewman's machine guns during training exercises*

## ARMAMENT

The Westland Lynx carries a variety of weaponry, depending on the mission at hand. The Royal Navy Lynx deploys with a complement of four Sea Skua anti-ship missiles with a standoff operational range of 25 kilometres. Other options include a pair of 267-kilogram Sting Ray torpedoes or two depth charges during anti-ship and anti-submarine operations. The British Army attack variants mount a pair of 20mm cannon, two pods carrying multiple CRV7 70mm rockets for use against ground targets, and up to eight BGM-71 TOW anti-tank guided missiles to counter enemy tanks and armoured vehicles. Light 7.62mm and heavy Browning .50-calibre machine guns provide secondary firepower.



*This Lynx mounts a missile affixed to a hard point on its port side*



**"INTERCHANGEABLE  
INTEGRATED DISPLAY  
UNITS PROVIDE  
ADDITIONAL FLIGHT  
AND SYSTEMS DATA"**

*This cockpit view of the Westland Lynx helicopter reveals a spacious and utilitarian layout*



The pictured Westland Lynx is on display at the Helicopter Museum, Weston-super-Mare. For more information visit: [www.helicoptermuseum.co.uk](http://www.helicoptermuseum.co.uk)

## COCKPIT

The cockpit of the Westland Lynx provides space for the pilot and observer/copilot seated side by side. Sensors and avionics are customarily integrated with the helicopter's avionics management system (AMS) and may be controlled by either crewman. Interchangeable integrated display units provide additional flight and systems data. Some variants supply heads-up displays and dual controls with engine instrumentation running vertically to the pilot's right. All British Army Lynx variants are fitted with dual controls, while only some of the Royal Navy helicopters are so configured. Army helicopters equipped with TOW missiles mount control boxes directly in front of the pilot.



*Levers and controls are readily accessible for either the pilot or copilot aboard the Lynx*





*The Lynx's versatile design allows its transformation from one mission task to another in as little as 40 minutes*

## DESIGN

The basic Westland Lynx design is a proven platform for multiple military functions, including varied combat situations, air-sea rescue, ground extraction, troop transport and reconnaissance. The Lynx may be converted from one mission type to another in as little

as 40 minutes. Army Lynx crews often include a door gunner as a third member. The transport cabin is accessed via sliding doors on the fuselage sides. A basic design variation is the use of skids with the Army Lynx, while wheels are installed in Royal Navy models to facilitate movement aboard ships. Rotor blades and the tail are folded for shipboard storage.

## SERVICE HISTORY

**ALTHOUGH THE ROYAL NAVY RETIRED THE WESTLAND LYNX FROM ACTION IN THE SPRING OF 2017, NUMEROUS NATIONS STILL OPERATE THIS VERSATILE HELICOPTER**

Since its military debut in the late 1970s, the Westland Lynx has been a popular multirole helicopter with British forces as well as the militaries of over a dozen other countries. Along with the improved Super Lynx introduced in the 1990s, the helicopter continues in service with the armed forces of countries including Germany and France, although the British military has begun to replace it with the AgustaWestland AW159 Wildcat.

The Lynx gained fame during the Falklands War of 1982. The HAS.2 anti-submarine variant was carried aboard several Royal Navy warships and introduced electronic surveillance measures while serving as decoys against Argentine Exocet anti-ship missiles. On 3 May, Lynxes from the destroyers HMS Coventry and HMS Glasgow executed the first firing of a Sea Skua missile in combat, heavily damaging the Argentine oceangoing tug *Alf rez Sobral*, which had fired on a Royal Navy Sea King helicopter. Three Lynxes were lost in the Falklands when the warships that carried them were sunk.

During the 1991 Gulf War – triggered by the Iraqi invasion of Kuwait – Royal Navy Lynxes used Sea Skuas to destroy 14 Iraqi naval vessels attempting to escape to Iran. In the Battle of Bubiyan, Lynx pilots took out minesweepers, a minelayer, patrol craft and several fast attack craft without suffering any losses. Lynxes of No. 654 Squadron Army Air Corps destroyed four Iraqi T-55 tanks and two armoured personnel carriers with TOW missiles.

Additionally, the Lynx has seen action in Northern Ireland, Kosovo, Sierra Leone, the 2003 invasion of Iraq that toppled dictator Saddam Hussein, and in Afghanistan, routinely flying transport, escort, ground support and reconnaissance missions. Modified helicopters have also operated as aerial command posts.

In March 2017, Lynx helicopters of No. 815 Naval Air Squadron performed a farewell flyover at Royal Naval Air Station Yeovilton in Somerset.

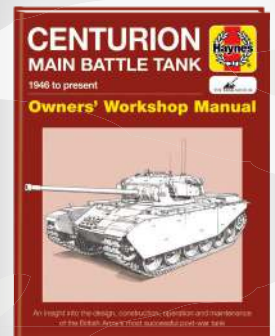
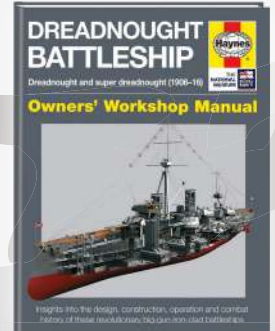
*Improvements in navigation, communications and radar systems have helped to ensure the Lynx remains a world-class military vehicle*



**“DURING THE 1991 GULF WAR, ROYAL NAVY LYNXES USED SEA SKUAS TO DESTROY 14 IRAQI NAVAL VESSELS ATTEMPTING TO ESCAPE TO IRAN”**



A WORLD OF  
**MILITARY  
INFORMATION**



WAITING TO BE  
**DISCOVERED**



**Haynes**  
shows you how



www.haynes.com



# REVIEWS

Our pick of the newest military history titles waiting for you on the shelves

## CRIMES UNSPOKEN

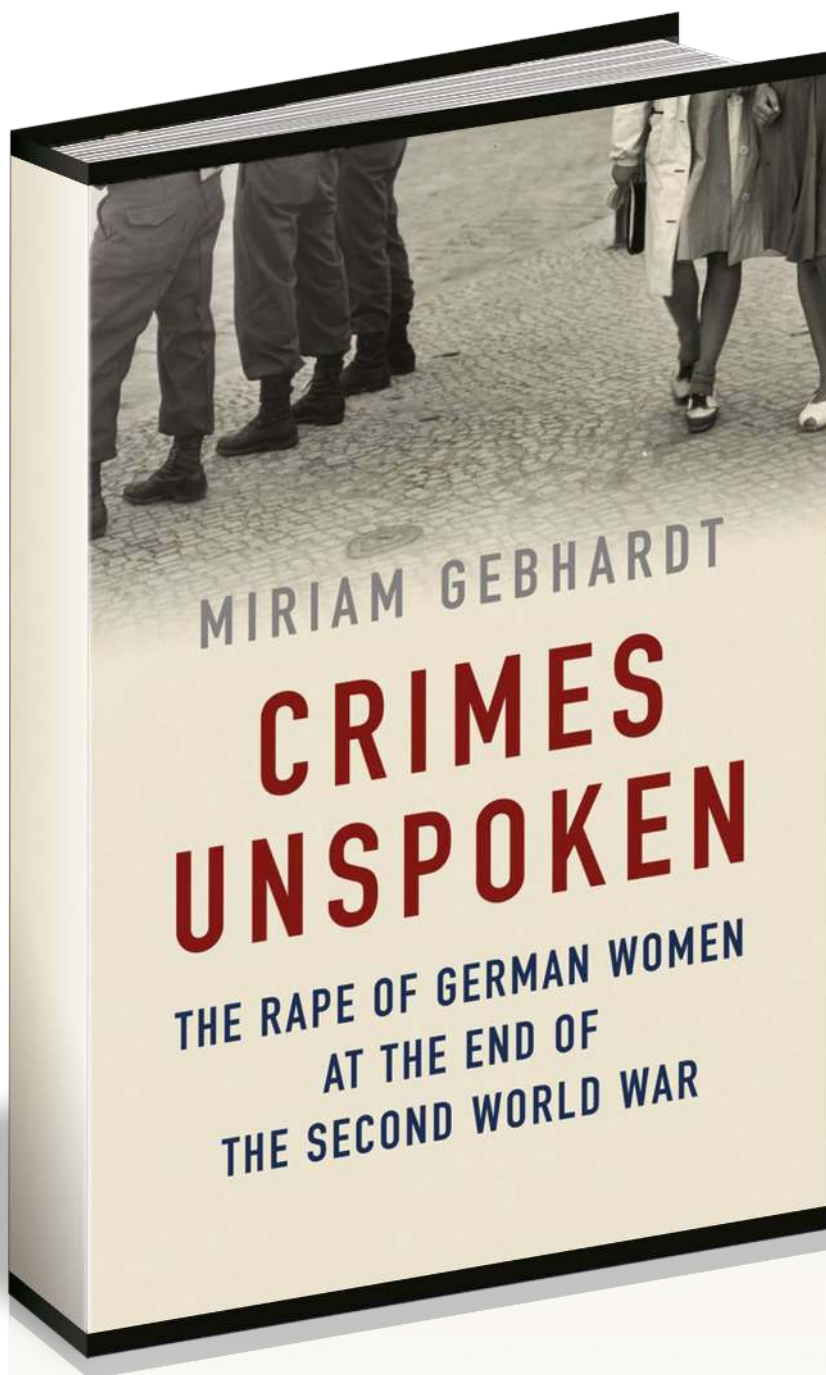
**Author:** Miriam Gebhardt **Publisher:** Polity Press **Price:** £20.00 **Released:** Out now

### A CHILLING RE-INVESTIGATION OF A FORGOTTEN TRAGEDY

You often hear about the atrocities that German soldiers under the Nazi regime perpetrated on both fronts, while on the offensive and particularly while retreating. But when it comes to the mass rapes the Allied forces committed against women, children and even men, in Germany in the dying embers of World War II, and for some years of the occupation after... not so much. Nearly a million German women suffered terrible repeated abuse at the hands of these aggressors, some of whom sought either a form of retribution for what the Nazis had done to them, their families, their countrymen or their country. Others were simply driven by the promise that they could take their pick of the conquered to satisfy their sexual urges, having been in a persistent battle mode for weeks with no leave or personal time.

Early into this eye-opening, sometimes difficult to read account, historian and journalist Miriam Gebhardt shoots down the common preconceptions of exactly whose feet the blame should be laid at. It's too easy to point the finger at the feared Bolshevik invaders from the east, even though Stalin's forces were also responsible for these crimes. Hundreds of thousands of rapes were committed by American GIs, French and British troops (although Gebhardt's research shows Brits had a better reputation than other Allied nations). Women were herded like cattle into houses or large rooms where they could be taken at will. Men were shot for trying to defend their wives, mothers gave themselves to officers to protect their children, who often died in violent attacks or were left with horrific physical and mental scars from gang rapes. German police and their courts had no power here; the Allied military was the law and the majority of these attacks went unpunished.

Gebhardt is unrelenting in relaying one harrowing story after another, some first-hand excerpts taken from diaries of the victims, their loved ones or often, clergymen. She's also unflinching in the detail of the rapes themselves and the cultural misconceptions on both sides that led to these crimes. The image she paints of German civilians fearfully waiting for either the Russians or the Americans to arrive and occupy their town is compelling. Their trepidation of how the enemy soldiers would treat them was compounded by their own racial prejudices, Nazi propaganda and the tidal wave of terrifying (and not unfounded) rumours that swept across the country ahead of the front line. Some chose to kill themselves rather than endure this abuse and face the potential shame of having an illegitimate child. In one case, a German farmer chose to murder his wife and children, a crime for which he was convicted and executed nearly 20 years later. It's a meticulous and fascinating study into the victims of World War II who are rarely considered, much less written about.





# BEYOND MY WILDEST DREAMS

**Writer:** David Teacher MBE **Publisher:** DT Publishing **Price:** £9.99 **Released:** July 2016

**THIS FASCINATING AUTOBIOGRAPHY IS A MOVING PERSONAL STORY OF A WWII VETERAN CAUGHT UP IN SOME OF THE MOST MOMENTOUS EVENTS IN MODERN HISTORY**

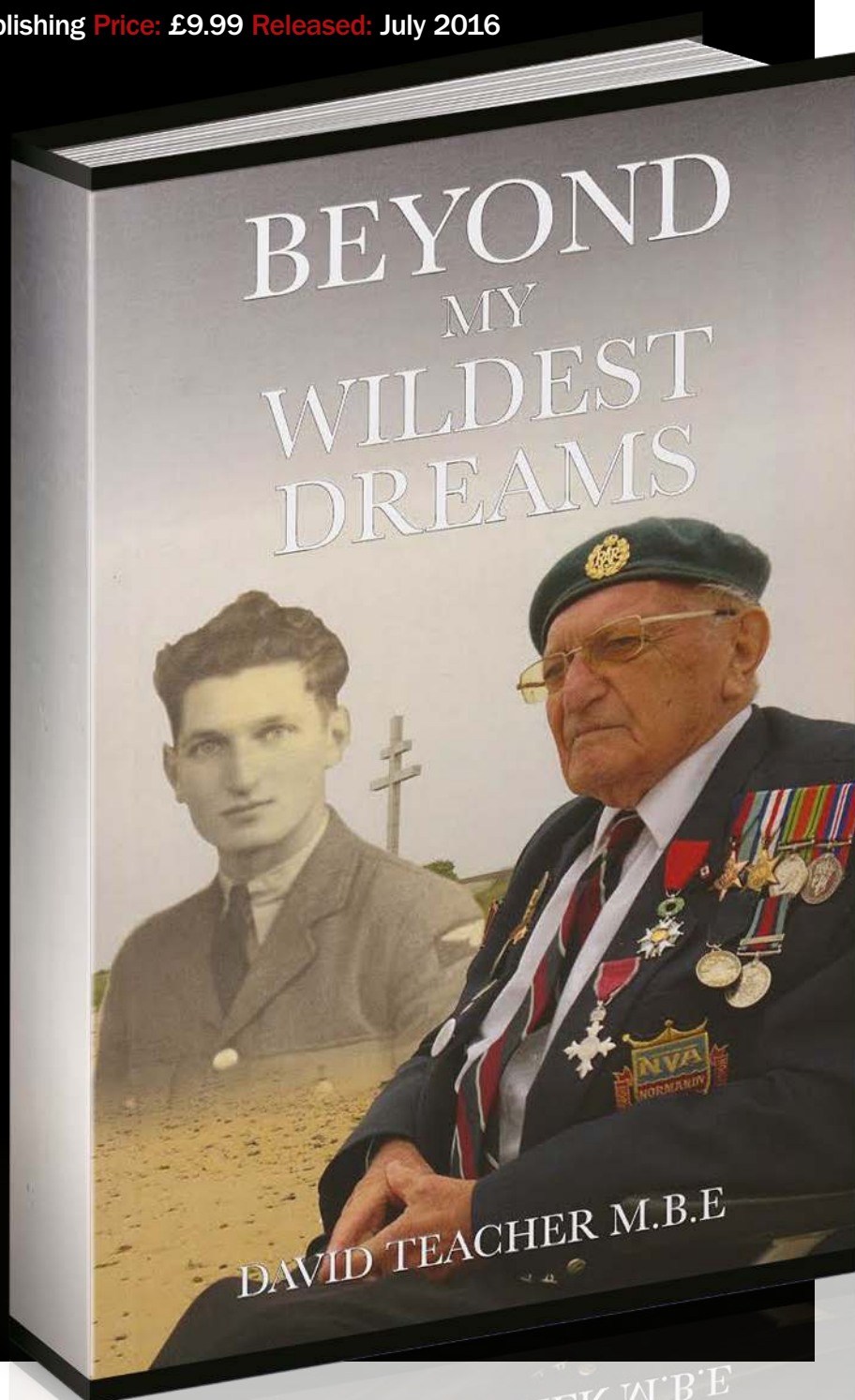
As one of the first to land on Juno Beach on D-Day, David Teacher automatically secured a place in the history books. As a 20-year-old mechanic in the Royal Air Force, Teacher drove a Bedford QL truck from his landing craft on 6 June 1944 and remained at Juno for three months to ensure that the Allied invasion of Europe was successful. However, his war was not just confined to Normandy and Teacher later saw heavy fighting during the Battle of the Bulge before spearheading the RAF ground advance into Nazi Germany.

Teacher still volunteers as a speaker about his wartime experiences at Imperial War Museum North in Manchester and with the assistance of fellow museum volunteer Chris Cookson, he has written a vivid account of his life. *Beyond My Wildest Dreams* covers a unique childhood spent in British Palestine, his dramatic war years serving with the RAF and his later career where he was honoured with both an MBE for services to charity and the Légion d'honneur.

Thanks to historical research by Cookson and Mike Fenton, Teacher's book is highly detailed and paints a precise picture of one man's war. However, Teacher never lets the facts overtake the narrative and the history behind his journey is cleverly interspersed between his personal experiences, along with a range of fascinating photographs. It is a moving work of an ordinary man caught up in extraordinary circumstances, many of them frequently horrific and tragic in equal measure. Nevertheless, Teacher's optimistic and generous nature is present throughout and it is this quality that makes the book a thoroughly engaging and touching read.

*Beyond My Wildest Dreams* is available to buy on Amazon at [www.amazon.co.uk/Beyond-Wildest-Dreams-David-Teacher](http://www.amazon.co.uk/Beyond-Wildest-Dreams-David-Teacher). All proceeds will fund trips for WWII veterans to museums and commemorations.

**"THE HISTORY BEHIND HIS JOURNEY IS CLEVERLY INTERSPERSED BETWEEN HIS PERSONAL EXPERIENCES, ALONG WITH A RANGE OF FASCINATING PHOTOGRAPHS. IT IS A MOVING WORK OF AN ORDINARY MAN CAUGHT UP IN EXTRAORDINARY CIRCUMSTANCES, MANY OF THEM FREQUENTLY HORRIFIC AND TRAGIC IN EQUAL MEASURE"**



DAVID TEACHER M.B.E

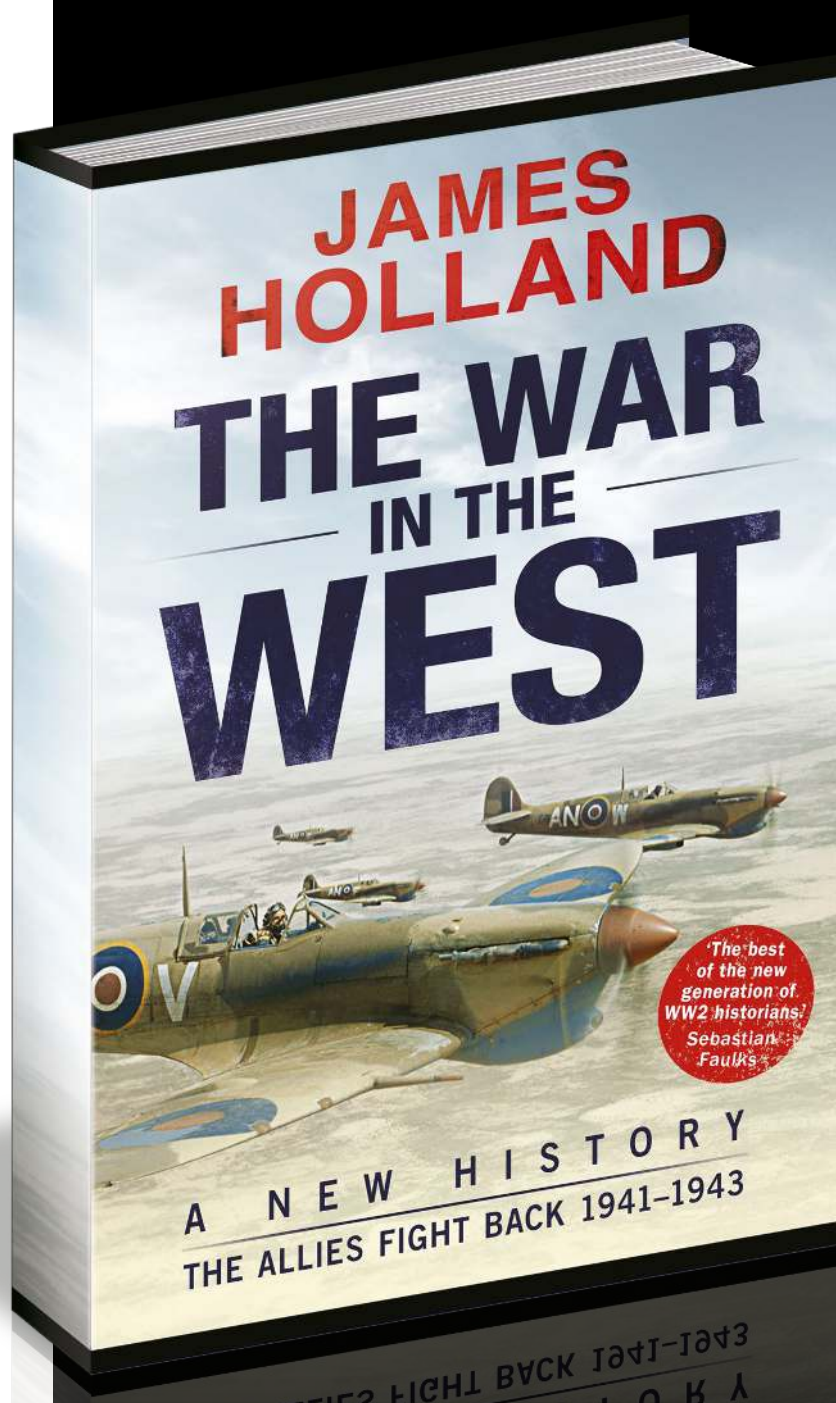


# THE WAR IN THE WEST

## A NEW HISTORY VOL. II

### THE ALLIES FIGHT BACK (1941-43)

Author: James Holland Publisher: Bantam Press Price: £25 Released: Out now



#### IMMERSE YOURSELF IN THE CONTINUATION OF A GRIPPING NEW HISTORY OF WORLD WAR II

James Holland has established himself as one of the premier World War II historians, with titles such as *Italy's Sorrow*, *Together We Stand* and *The Battle Of Britain* to his credit. In this, the second instalment of his planned three-parter on the war, he picks up the themes of his first volume, *Germany Ascendant 1939-1941*.

Holland's two greatest qualities, his engaging writing style and his ability to weave multiple threads into a convincing whole, are on display once more in this accessible and authoritative history. Zooming in to focus tightly on a German anti-aircraft crew slogging its way through Russia, then pulling back to consider the relative importance of the various theatres (the Mediterranean, the Middle East, the Atlantic and the Eastern Front), before charting the steadily escalating involvement of the United States and the crumbling edifice of Mussolini's Italy, the narrative never runs away from Holland. He is as comfortable on the daily details of life for the common soldier as he is describing millions of men manoeuvring and fighting on the road to Moscow.

The operational level, often neglected in favour of strategic planning and gritty battle descriptions, takes centre stage in Holland's work, which allows him to present the conflict in a fresh and enlightening manner. 'The Allies Fight Back' might be the subheading for this volume, but it might as well be called 'Germany Doomed' when that country's massive logistical burden is clearly laid out. Having planned for quick, decisive victories against France, Britain and then Russia, Germany's failure in all but one case meant the writing was very much on the wall. The colossal gamble of Operation Barbarossa, the invasion of Russia, was necessary because Britain had failed to kneel before the Nazi onslaught. Needing to concentrate on its rivals one by one, Germany instead found itself fending one off while attacking another, all the while watching as America geared itself up for war.

The Nazi war machine, often lauded as infallible and frighteningly efficient, is exposed as a flawed beast, working on 40 new aircraft designs simultaneously when what was needed was massive production of a few reliable models. It led to the creation of planes like the Messerschmitt Me 210, which was more lethal to its own crews than to its opponents. The picture emerges of a German arms industry barely keeping pace with its losses, while Britain and America steadily ramped up their own production.

The war was hanging by a thread for Germany as its divisions rolled into Russia, but this also had doom written all over it. With only a slightly larger force than that which had invaded France and the Low Countries in 1940, Germany was moving into a country 10 times as big, with seeming unlimited manpower.

Holland, a successful fiction author as well, keeps his reader gripped with an engrossing tale, which both educates and entertains. In Holland's own words, this is "a truly epic and astonishing story" and the same could be said for this book.



# PRAETORIAN

## THE RISE AND FALL OF ROME'S IMPERIAL BODYGUARD

**Author:** Guy de la Bédoyère **Publisher:** Yale University Press **Price:** £25 **Released:** 3 March 2017

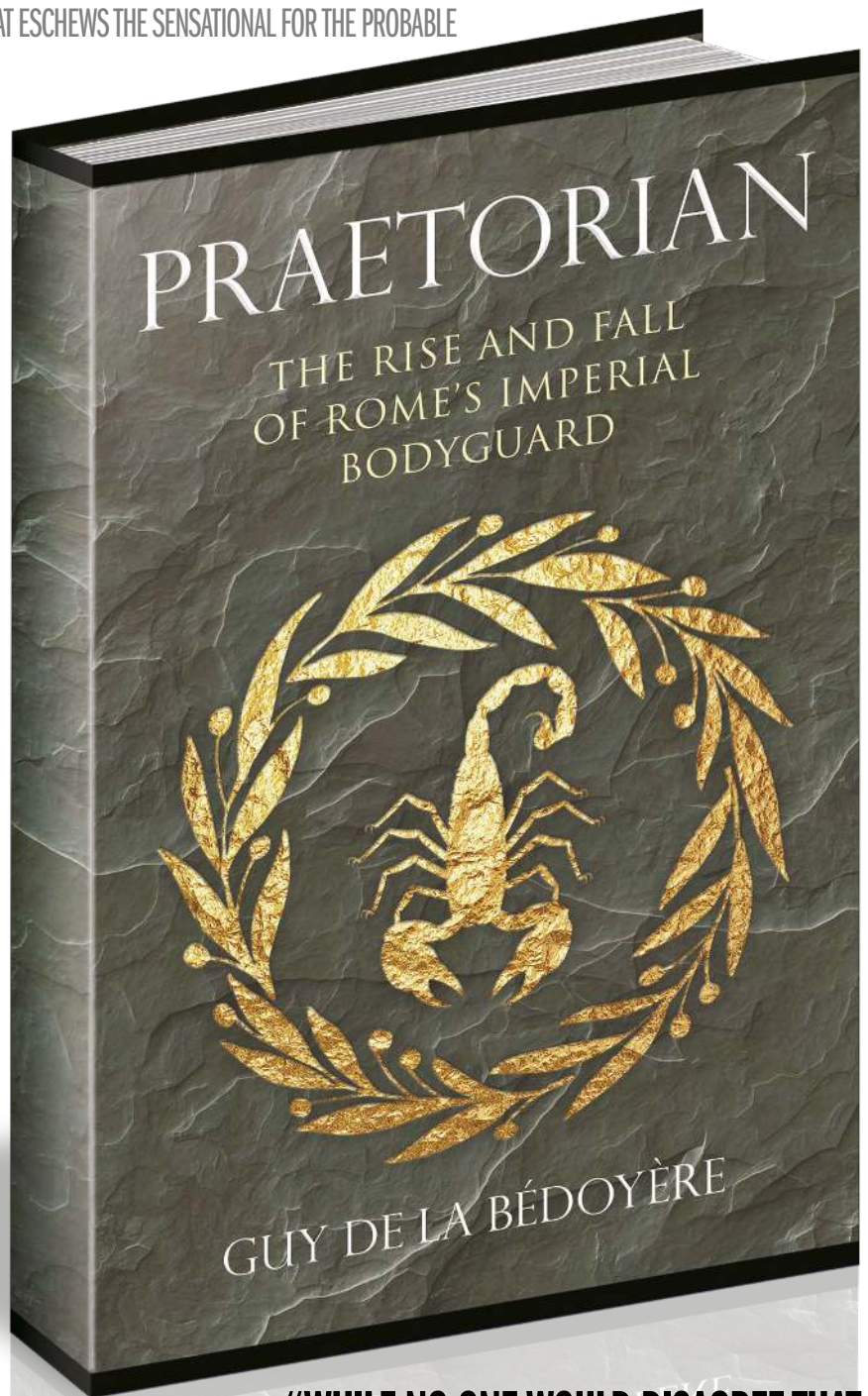
A SCHOLARLY CHRONOLOGICAL HISTORY OF THE PRAETORIANS THAT ESCHEWS THE SENSATIONAL FOR THE PROBABLE

De la Bédoyère's book on the Praetorians will likely become the definitive account of the rise and fall of the emperor's bodyguards, but whether it is the best book on the subject depends on what the reader is looking for when opening its pages. If you are looking for a sober and scholarly history of the Praetorians, with a thorough examination of the sources (or lack of them) and extensive discussions of such issues as whether the guards' cohorts were quingenary (composed of 500 men) or milliary (made up of 1,000 troops), and the evolution of the term cohorts praetoria from the purely descriptive to the imperially prescriptive, then you will be in historical heaven. However, if you would prefer a gossipy trip through the underbelly of Roman imperial politics and the temptations attendant upon being the bodyguard to the most powerful man in the world, then *Praetorian* might disappoint.

A serious historian, de la Bédoyère prefers to pass over, or casually refer to, some of the more salacious details of Roman history on the not unreasonable grounds that these were likely inventions to please an audience no less keen on scandal than are audiences of reality TV today. In Roman terms, de la Bédoyère is more Josephus than Suetonius. While no one would disagree that history should inform, it's an open question as to how much it should entertain. For instance, when presented with an opportunity such as Hadrian's Praetorian prefect going by the name of Quintus Marcus Turbo, should the responsible historian abstain from the temptation to turn the name into a pun because it is beneath his historical credibility, or should he revel in it, claiming that it will help the reader to remember while really indulging in wordplay for the sheer fun of it. It will come as no surprise that de la Bédoyère reacts to the name with all the disdain of Lady Bracknell presented with a handbag.

This is not to say the book is dull but rather that it turns, deliberately, from the sensational to the plausible. It is at its liveliest where our sources are most extensive, but it becomes interestingly scholarly where the sources are at their thinnest as this allows de la Bédoyère to deploy his considerable knowledge of epigraphs – the inscriptions cut into tombs – and temple dedications to deepen and broaden our understanding of how the Praetorians were deployed in the later stages of the Empire.

From being bodyguards, they had become imperial firefighters, putting out rebellions and repelling invasions, or even acting as sentries on a grain route in far-off Numidia. It was a long way from the intrigues of Sejanus. Indeed, it was the intrigues of the prefects in the disastrous 3rd century that eventually led to the dissolution of the Praetorians, when they picked the wrong side in the war between Constantine and Maxentius. Having gained the purple, Constantine was not about to let the Praetorians play the role of emperor maker again, and the Castra Praetoria, their camp in Rome, was demolished. The Praetorians were no longer players. But, among the many books on the Guard, this one certainly is.



**“WHILE NO ONE WOULD DISAGREE THAT HISTORY SHOULD INFORM, IT’S AN OPEN QUESTION AS TO HOW MUCH IT SHOULD ENTERTAIN”**



**Untold stories of the world's greatest monarchs**

[www.historyanswers.co.uk](http://www.historyanswers.co.uk)

**History of Royals**

Available  
from all good  
newsagents and  
supermarkets

**ON SALE NOW**

**Medieval fight club • Henry VII's Camelot • Catherine of Aragon**

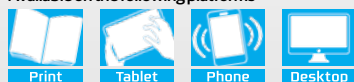
ROYAL STORIES	CASTLES & PALACES	INTERVIEWS	GALLERIES	ROYAL NEWS

**BUY YOUR ISSUE TODAY**

Print edition available at [www.myfavouritemagazines.co.uk](http://www.myfavouritemagazines.co.uk)

Digital edition available at [www.greatdigitalmags.com](http://www.greatdigitalmags.com)

Available on the following platforms



[facebook.co.uk/HistoryOfRoyals](https://facebook.co.uk/HistoryOfRoyals)

[twitter.com/HistoryOfRoyals](https://twitter.com/HistoryOfRoyals)



# NEXT MONTH

**ON  
SALE**  
13 July  
2017

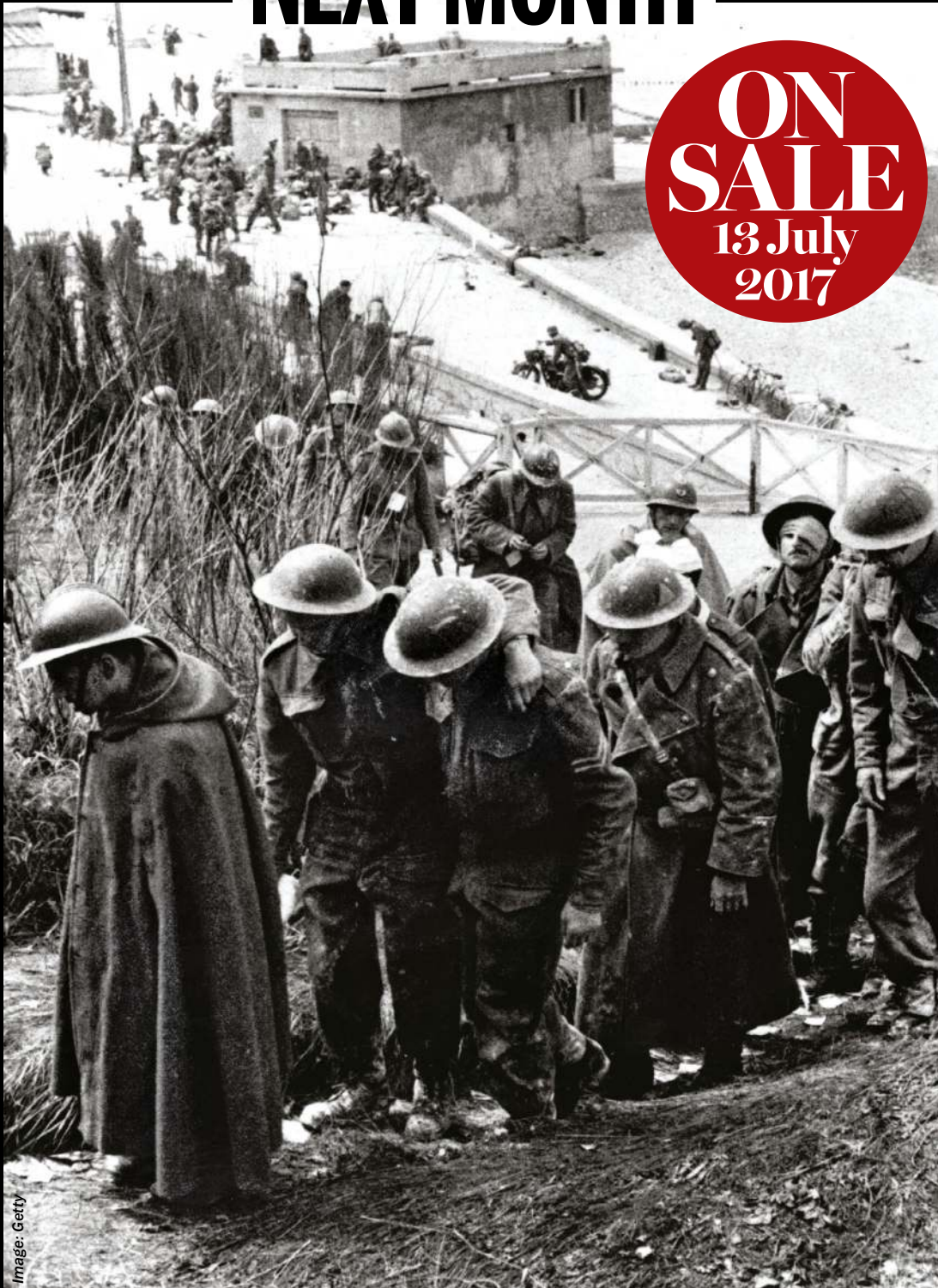


Image: Getty

# DUNKIRK

DISCOVER THE REAL MIRACLE ON THE BEACHES,  
AND THE HEROIC STORIES OF THOSE LEFT BEHIND

## HISTORY OF WAR

Future Publishing Limited  
Quay House, The Ambury, Bath BA1 1UA

### Editorial

Editor **Tim Williamson**  
timothy.williamson@futurenet.com  
01202 586264

Senior Designer **Curtis Fermoer-Dunman**

Staff Writer **Thomas Garner**

Editor in Chief **James Hoare**

Senior Art Editor **Duncan Crook**

### Contributors

Edoardo Albert, Ben Biggs, Jo Cole, Murray Dahm, Tom Farrell, Charlie Ginger, Mike Haskew, Rob Schaefer, Mark Simner, David Smith, William Welsh, Steve Wright

### Cover images

World of Tanks

### Photography

Alamy, The Art Agency, Rocio Espin, Mary Evans, Getty, Alex Pang, TopFoto

All copyrights and trademarks are recognised and respected

### Advertising

Media packs are available on request

Commercial Director **Clare Dove**  
clare.dove@futurenet.com

Regional Advertising Director **Mark Wright**  
mark.wright@futurenet.com

Advertising Manager **Toni Cole**  
toni.cole@futurenet.com

Media Sales Executive **Tom Sharpe**  
tom.sharpe@futurenet.com  
01225 687232

### International

History of War is available for licensing. Contact the International department to discuss partnership opportunities

International Licensing Director **Matt Ellis**  
matt.ellis@futurenet.com

### Subscriptions

Email enquiries [contact@myfavouritemagazines.co.uk](mailto:contact@myfavouritemagazines.co.uk)

UK orderline & enquiries **0344 848 2852**

Overseas order line and enquiries **+44 (0) 344 848 2852**

Online orders & enquiries [www.myfavouritemagazines.co.uk](http://www.myfavouritemagazines.co.uk)  
Head of subscriptions **Sharon Todd**

### Circulation

Circulation Director **Darren Pearce**  
01202 586200

### Production

Head of Production US & UK **Mark Constance**

Production Project Manager **Clare Scott**

Advertising Production Manager **Joanne Crosby**

Digital Editions Controller **Jason Hudson**

Production Controller **Nola Cokely**

### Management

Finance & Operations Director **Marco Peroni**

Creative Director **Aaron Asadi**

Art & Design Director **Ross Andrews**

### Printed by

Wyndeham Peterborough, Storey's Bar Road,  
Peterborough, Cambridgeshire, PE1 5YS

### Distributed by

Marketforce, 5 Churchill Place, Canary Wharf, London, E14 5HU  
[www.marketforce.co.uk](http://www.marketforce.co.uk) Tel: 0203 787 9060

We are committed to only using magazine paper which is derived from responsibly managed, certified forestry and chlorine-free manufacture. The paper in this magazine was sourced and produced from sustainable managed forests, conforming to strict environmental and socioeconomic standards. The manufacturing paper mill holds full FSC (Forest Stewardship Council) certification and accreditation

### Disclaimer

All contents © 2017 Future Publishing Limited or published under licence. All rights reserved. No part of this magazine may be used, stored, transmitted or reproduced in any way without the prior written permission of the publisher. Future Publishing Limited (company number 2008885) is registered in England and Wales. Registered office: Quay House, The Ambury, Bath BA1 1UA. All information contained in this publication is for information only and is, as far as we are aware, correct at the time of going to press. Future cannot accept any responsibility for errors or inaccuracies in such information. You are advised to contact manufacturers and retailers directly with regard to the price of products/services referred to in this publication. Apps and websites mentioned in this publication are not under our control. We are not responsible for their contents or any other changes or updates to them. This magazine is fully independent and not affiliated in any way with the companies mentioned herein.

If you submit material to us, you warrant that you own the material and/or have the necessary rights/permissions to supply the material and you automatically grant Future and its licensees a licence to publish your submission in whole or in part in any/all issues and/or editions of publications, in any format published worldwide and on associated websites, social media channels and associated products. Any material you submit is sent at your own risk and, although every care is taken, neither Future nor its employees, agents, subcontractors or licensees shall be liable for loss or damage. We assume all unsolicited material is for publication unless otherwise stated, and reserve the right to edit, amend, adapt all submissions.

ISSN 2054-376X



Future is an award-winning international media group and leading digital business. We reach more than 57 million international consumers a month and create world-class content and advertising solutions for passionate consumers online, on tablet & smartphone and in print.

Future plc is a public company quoted on the London Stock Exchange (symbol: FUTR).  
[www.futureplc.com](http://www.futureplc.com)

**Chief executive** Zillah Byng-Thorne  
**Non-executive chairman** Peter Allen  
**Chief financial officer** Penny Larkin-Brand

Tel +44 (0)1225 442 244



# BOER WAR GAME OF CHANCE



*Produced in 1900 by the games manufacturer J Jaques and Son (a company that still exists today), Boer Or Briton was an oddly sanitised reaction to an horrific but faraway conflict*

This unique game for children reflected the jingoism of the British public towards a brutal conflict in South Africa

**T**he Second Boer War was a grim and controversial conflict. Between 1899-1902, tens of thousands of people died during the British Empire's attempt to annex the Boer republics of the Transvaal and the Orange Free State. It was a conflict characterised by imperial blunders, guerrilla warfare and, most chillingly for the new century, the widespread use of deadly concentration camps.

Despite the awful realities, the British public were consumed by a wave of patriotic jingoism in the face of dogged Boer resistance and fascination with the war grew, even among children. Perhaps the most famous impact of the war on British children was the subsequent

creation of the Boy Scout Movement by the Colonel Robert Baden-Powell, but there was also an immediate impact on young people.

Schoolchildren were educated in the 'superiority' of the British Empire and military themes became popular, including jingles. One of these went: "Lord Roberts and Kitchener, General Buller and White/Went to South Africa to teach the Boers how to fight." The war was also extensively covered in magazines such as *Boy's Own Paper* and *Girl's Realm*, and catering for children resulted in companies manufacturing model soldiers and board games.

All of the board games required dice and some required strategic skill, such as

*The War In South Africa or Called To Arms.* However, *Boer Or Briton: A New South African War Game* was a game of chance, with players required to use numbered cards, alphabet letters and a spinning top to determine whose side they were on. It seems remarkable today that the conflict was viewed so frivolously.

**NATIONAL  
ARMY  
MUSEUM**

For more information visit: [www.nam.ac.uk](http://www.nam.ac.uk)

This board game is on display in the newly reopened National Army Museum in Chelsea, London. The museum is open daily from 10.30am-5.30pm (8pm on the first Wednesday of every month).

Image: National Army Museum





History in Miniature since 1893

## MUSEUM COLLECTION

The Museum Collection from W. Britain continues to expand with new and exciting additions including Winston Churchill and Theodore Roosevelt – two giants of the twentieth century who led the Allied Forces to World War Two victory. Military leaders from the Great War are also present with General “Black Jack” Pershing, Field Marshal Kitchener and Kaiser Wilhelm II all featured. Other popular figures include Abraham Lincoln, George Washington, William B Travis (not featured below) and Santa Anna.



1 Piece Set

**Winston Churchill 1898**  
B10049



1 Piece Set

**Theodore Roosevelt 1898**  
B10050



1 Piece Set

**General “Black Jack”  
Pershing 1917-18**  
B10051



1 Piece Set

**Field Marshal Kitchener  
1914-16**  
B10052



1 Piece Set

**Kaiser Wilhelm II 1912-18**  
B10053



1 Piece Set

**George Washington  
1780-83**  
B10054



1 Piece Set

**Abraham Lincoln 1861-65**  
B10055



1 Piece Set

**Santa Anna 1836**  
B10056

[www.wbritain.net](http://www.wbritain.net)

**1:30 Scale**

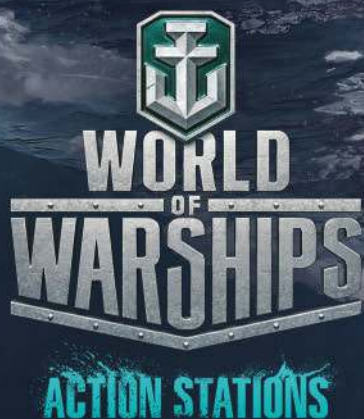
Die-cast Figurines

To view the full range of figures from the Museum Collection or to find your nearest stockist please visit our website.



Model, Collect & Create





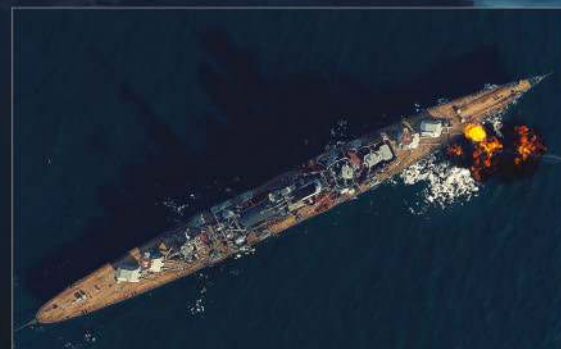
## Battle of the Denmark Strait Bismarck's Pyrrhic Victory

In the early morning of May 24, 1941, several giants rocked the Atlantic in the Battle of the Denmark Strait. Kriegsmarine battleship SMS Bismarck and heavy cruiser SMS Prinz Eugen clashed with the pride of the Royal Navy. Battle cruiser HMS Hood and battleship HMS Prince of Wales were all that stood in the way of Operation Rheinübung.

Just 15 minutes after the start of encounter – at 05:52 – Hood unleashed a salvo from around 15 miles (24km) away. But in doing so, she could not escape covering fire from Bismarck. At 06:00, an explosion engulfed the artillery cellars in Hood's hold. All the while, Prince of Wales fired blindly and managed to score a hit. The great wound caused by this tore Bismarck open and British ships hounded her oil trail, following her as she attempted to escape her fate.

A fate that you can avert in World of Warships, where over 200 vessels, including the famed Bismarck, are waiting for tactical commanders to rewrite their history. Experience naval combat now to get a free Premium German cruiser and more exclusive content.

Play for free at [warships.co.uk](http://warships.co.uk)



\*Enter the invite code HELLOWARSHIPS on [warships.co.uk](http://warships.co.uk) when creating your free Wargaming account and get the German Premium cruiser Emden, a port Slot, 500 doubloons and 7 days of Premium account. The code is valid on the European World of Warships server and expires March 2018.



**WARGAMING.NET**  
LET'S BATTLE

© 2017 Wargaming.net. All rights reserved.